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HISTORY OF ART
IN PRIMITIVE GREECE.

MYCENIAN ART.

HISTORY OF
Art in Primitive Greece
MYCENIAN ART

FROM THE FRENCH

OF

GEORGES PERROT,

PROFESSOR IN THE FACULTY OF LETTERS, MEMBER OF THE INSTITUTE, PARIS,

AND

CHARLES CHIPIEZ.

ILLUSTRATED WITH FIVE HUNDRED AND FORTY-FOUR ENGRAVINGS IN THE TEXT,
AND TWENTY COLOURED PLATES.

IN TWO VOLUMES.—VOL. I.

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TRANSLATOR'S NOTE.

SINCE the beginning of the present century numerous monuments have been brought to light, old writings have been read and translated, chronologies have been discovered, thousands of inscriptions have been deciphered, and sculptures of the most varied kind have been exhumed, giving faithful portraiture of civilizations that had their being thousands of years before our era ; ancient history, therefore, has had to be entirely re-written.

There is scarcely a day, so to speak, that does not add to the knowledge we already possessed as to the frequent and intimate intercourse which Hellas entertained with those Eastern nations whose territories extended to her own borders, and who were in the enjoyment of a culture little inferior to that of Babylon and Egypt at an age when the Hellenes were still semi-savages. Accordingly, no Art-history of Greece can now be undertaken without reference to Oriental art.

Hence is explained why the preliminary work of the joint authors should have grown into five volumes, ere reaching the Grecian shores. Remembering that no other nation has had the æsthetic feeling developed to so remarkable a degree as the Hellenes, it will cause no surprise to hear that the Art-history of Greece will comprise three volumes, as lavishly illustrated as heretofore by way of living commentary. The illustrations will continue to be selected from among such as have been indifferently reproduced or not reproduced at all. Thanks to the employment of new processes, the publishers declare that the single volumes will be issued at popular prices.

There is more : the conditions of the book-market are not the same in Paris as they are in this country. Generally, the expenses of publication of educational and scientific works are in part, if not wholly, defrayed by Government. Here they fall

entirely on private enterprise, so that it has been deemed advisable to slightly abridge the text in those portions that are somewhat tumid with "padding": the history of Thera for example, as well as the exploded theories of MM. Stillmann and Boetticher, and the beginnings of chapters that do little more than repeat prior exposition.

Great care has been taken to use the pruning-knife in as delicate a fashion as possible; nevertheless, it is fully expected that some will deem it has been ruthlessly handled, whilst others will say that it has by no means been carried far enough.

I. GONINO.

THE Publishers tender their most sincere thanks to Mr. John Murray for giving them permission to use some of his blocks from Schliemann's *Tiryns* and *Mycenæ*.

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PRIMITIVE GREECE:

MYCENIAN ART.

CHAPTER I.

GENERAL CHARACTERISTICS OF GREEK CIVILIZATION.

As to Method and Plan pursued in this History.

WE successfully traversed the countries, Egypt and Chaldæa, in which a very ancient civilization had its being and flourished, and after many windings reached the foot of the hills of Fars, where we beheld the Achæmenian kings at work cutting in the live rock the monumental façades of their tombs; in the train surrounding those Eastern despots, we ascended the ramps leading to lofty platforms on which were raised the pillars and palaces of Susa and Persepolis. Taking breath and looking around us at the end of so long a journey, we are made conscious of having swept past Greece, as though ignorant of her hard beginnings, then of her swifter progress, of the whole sequence in fact of those efforts by which Hellenic genius, towards the end of the sixth century B.C., came to possess a technique which enabled it to exercise a marked influence on architecture in general, and in a special manner on Persian architecture. This influence was pointed out by us in our volume on Persia, when we strove to gauge its effects. That was however before opportunity had been given us of placing before the reader the monuments of Ionian art, which better than all besides would have justified the opinions therein set forth. We asked to be

taken on our word, assuming the reader to be acquainted with much which he could not possibly know.

In appearance, fortunately in appearance only, this has all the air of a defective method. To render intelligible such facts as he deems worthy of retention and allow the mind to grasp their connection with one another, the historian brings out those he has selected from an enormous mass of phenomena, and in so doing unavoidably breaks their natural sequence ; were he to act otherwise and allow equal weight to all the facts, they would soon become unwieldy and difficult to move within the circles which he has prefixed to himself, the ordering of which varies according as he intends to call attention to this or that set of deeds or events. Our aim has been to study in its collective form the growth of that primitive and polite humanity which handed down to Hellas so many instances of its activity, so immense an array of tools and artistic shapes, so large an amount of materials both rough-hewn and wrought.

We have striven to define the peculiar intellectual bent of each nationality by the works which it produced in its season of independence, during what may be termed its golden age. We should however have failed to convey an exact notion of its qualities and its defects, had not we followed it from beginning to end, *e.g.* during the whole period of its evolution, and shadowed forth the nature of its latest manifestation when its last say was said. Only when this has been pronounced, in other words when the work is complete, can high criticism feel competent to pass a judgment that will stand.

For then, and then alone, it knows both the strength and weakness of the art whose productions have passed before its eyes ; the conditions in which it was called to live and move and have its being, whilst in the schemes which it chose from the first it finds the explanation of its merits and demerits, it perceives and points out the limits within which were necessarily confined its boldest flights. Now, the Eastern world carried on its plastic and industrial activity long after the day when Hellas began to fix her gaze on the ideal reached by the generations that came after the Medic wars. Old though that world was, it nevertheless succeeded in creating in Persia, during the reign of Darius and his successors, a new, grand, and truly noble type. It is impossible to imagine an Art-history of the East which

should leave Persia out of account. As well have an argument without a conclusion, a drama shorn of the last act; a general impression of incompleteness and unfinish would necessarily follow.

There was yet another reason which imposed upon us the plan that we have adopted: all Greece knew of the Oriental world was its decadence. When her intercourse with the empires of the Nile and the Euphrates valleys began, these had long left behind them their youth and growth, aye, even their maturity. Their power was on the wane; their art strove to make up what it had lost in rich invention and creative power by a somewhat affected grace and fineness. This was the case, in Egypt, for the Saït art. But when the Greeks began to visit that land, towards the middle of the seventh century B.C., they largely settled in the towns of the Delta, which had little else to show than buildings erected or repaired by the kings of the Twenty-sixth Dynasty; monuments carrying impressed upon them the mark of that elegant style, verging on affectation, of which we have published several examples.

As to that sculpture, the main characteristics of which were breadth, sincerity, and bold realism, which was known and practised in Egypt at an earlier epoch, it then lay buried in the depths of her necropoles. Ionian artists who modelled clay or smelted bronze in the workshops of Naucratis, might have ransacked the whole of Lower Egypt without lighting on a specimen of those living and all but speaking images which the curiosity of our contemporaries has brought to the light of day. These remarks apply in full to Mesopotamian art. The only notion the Greeks got of it was through the Assyrian and Babylonian arts of the second empire, wherein conventionalism held a conspicuous place; where, too, genuine specimens remarkable for boldness and frankness of touch, such as those that came from Tello, are exceedingly rare. Persian art is Asia's last-born child; hence, whilst we insisted on characteristics that may fairly be claimed as its own, we could not part it from Egyptian and Assyrian arts, into which it strikes out all its roots. With regard to Phœnicia, how and where should we have dared to cut asunder her history, notable alike for rare sequence and unity? The burden laid upon us was to show how, some

ten or twelve hundred years before our era, mayhap even sooner, she assumed the office of ubiquitous broker, of an intermediary moving to and fro between the East and West. We may be sure that a function bringing with it such large profits was not given up even when the Hellenic race, in its expansion, became the sole mistress of the Ægean sea. If, after the Medic campaigns, her war-ships can no longer show themselves beyond the headlands of Lycia, her merchantmen continue to frequent Hellenic and Italian seaports, where they bring commodities whose monopoly they keep in their own lands, the raw products which Tyrian and Sidonian traders obtained from the depths of Africa and Asia, wrought objects which they purchased of Egyptian and Chaldæan artificers, along with the manufactures of their own industry, imitated from foreign models. The fall of Tyre to the Macedonians and the founding of Alexandria greatly diminished, from the end of the fourth century B.C., the industrial and commercial importance of Phœnicia in the eastern basin of the inland sea; but the supremacy which had been lost in the east, was more than compensated in the west of the same sea by the bold and brilliant action of Carthage, where for a hundred and fifty years all the profits accruing from undivided sway were great enough to satisfy Punic lust of possession. Scant justice however would be done to the Canaanite, if we refused it our meed of praise for its untiring activity and the great services which it confessedly rendered to its customers down to the fateful struggle and the final overthrow of Carthage.

Consequently we were not free to halt mid-way and turn aside to learn what was taking place in either of the southern peninsulas of Europe, whilst the nations by whom the preparatory work of civilization had been accomplished were tottering under the weight of great age. Had we done so, we should have been open to the reproach of breaking asunder, without having any call for it, the continuity of an organic life, each of whose main phases ever preserved and reproduced some special features of the preceding epoch. Hence it has come to pass that we were gradually and almost imperceptibly led on to prosecute the Art-history of Asia to the Macedonian thunder-clap conquest, and even for Phœnicia to the day when the fateful fires were lighted for the burning of Tyre's greatest daughter. But under one

flag or another, whether by the hand of Scipio Æmilianus or Alexander, it is Hellenic genius which remains master of the field ; Polybius, in the company of the Roman pro-consul, witnesses the last night of Carthage. By and by, however, the East will take its revenge. It will take its revenge in the religious domain, with the creed of the man of Nazareth against the creed of Muhammad ; in the domain of art with cupolas surmounting Byzantine churches, with Persian mosques, with Arabian architecture and its exuberant ornamentation. But when armed Hellas, in the full pride of her manhood, gathered into her hands the management of the affairs of mankind, to hand it over later to Rome, her pupil and heir, who would not have deemed the cause of Hellenism, its language, literature, and arts, assured for all time against the freaks of fortune ? The point when Europe appeared triumphant along the whole line in her long strife against the East, was the natural goal of that part of our scheme which, starting with Egypt, terminated in Persia, and forms the first part of our work.

A new path now opens before us : the history of that Hellas whose triumph we have just proclaimed. As yet we have seen her only in profile and from the outside ; all we know of her up to the present time is the action she exercised by contact and example on that older world which outwardly looked so strongly constituted ; it is the power which was in her for loosening little by little its barriers, finally breaking them down, and withering with her touch as with palsy all its traditions, and in the end succeeding in having her language and the forms with which she clothed her ideas accepted, both in science and in arts. We recorded the phenomenon ; it behoves us now to justify and explain it away ; to this end, we shall have to retrace our steps and go up the path of those far-off ages in the twilight of which are hidden the beginnings of mankind, where, too, primitive germs unclothe. In this retrospective progress we shall scarcely be guided by mythic lore, far less by history ; but even at those points where their last flickering rays are lost in obscurity, we shall not on that account lose our foothold ; we are enabled to creep further back by the aid of the very primitive monuments brought to light by Schliemann and his fellow-workers within the last thirty years. These discoveries have handed over to the archæologist thousands of objects wrought by the hands of folk who, under various names, were the ancestors of the Hellenes of the

classic age, whether they come from Troy, Thera, Rhodes, and other islands, from Mycenæ, Tiryns, and a number of other points of Greece. They one and all help us to gain some faint notion of the daily life of these tribes, their social status, the degree of culture they had attained, and the handicrafts which they practised. Many difficulties are still in the way ; high criticism notices certain signs apparently belying each other, and is often obliged to suspend its judgment ; nevertheless, the consciousness of having data that were wanting less than half-a-century ago, though prudence may counsel reserve in many cases, puts it in a position to express from the outset a well-pondered and abiding opinion on the main questions submitted to its criterion.

At the threshold we are met with the problem which is the most difficult of all to determine. The Hellenic race appeared very late on the world's stage ; how did it manage to step so quickly in the foremost rank and cut so brave a figure ? How are we to explain its having gained the supremacy, and gathered in its firm grasp universal dominion, in so short a space of time ? To try and unfathom the unknown quantity, the figure or sign which might represent the inherent value of the Grecian race, its peculiar aptitudes, the special moral dispositions which it brought to that soil on which it settled so long ago that no date can now be fixed even by approximation, would be vain in the extreme. When we take to study the life and labours of a truly eminent man, and endeavour to define the elements which entered into the composition of his genius, there is no great difficulty in apportioning what he owed to the surroundings and the outward circumstances amidst which his life was spent, or the various influences which helped the growth of his genius ; let the analysis however be never so subtle, it is sure to be met at the end of its operations by a something, a residuum which will resist its most powerful tests, a combination of atoms whose arcana are not to be unravelled. This irreducible and undefinable something is genius itself, whether we call it superior intellectual energy, exceptionable power of one faculty or group of faculties which at once place the individual in whom the phenomenon shows itself immeasurably above his fellows, and whose manifestations generally appear in early youth, sometimes even during infancy. We might go on speculating for ever to no purpose as to why one individual rather than another should

be favoured with so rare and priceless a gift ; what the conditions required to enable Nature to bring forth this prodigy, or how their combination should be effected so as to produce the desired effect. As well conceive a method of observation so nice in its calculations, as to enable us to guess and point out beforehand the mother in whose bosom the miracle would be accomplished. Nobody knows and never will know.

Just as there are men of genius, so there are what may be termed nations of genius, and of all deserving the name none assuredly can match itself with the Greek race. And what is true of individuals, is equally true of peoples. With them also, no matter the care and nicety brought to bear on researches regarding them, sooner or later a primordial stock is reached which must be accepted as a fact which does not admit of explanation. Researches, however conducted, will at best but elucidate the process according to which this residuary stock or fund was modified by climate and events, now favouring, now opposing the upward flight of initial force ; but they are powerless to penetrate the mystery of those qualities and primary aptitudes, necessarily pre-existing and preceding all manifestations, fixed as they were long before by heredity, and began to make their appearance as soon as the nation which they characterize set about expressing by words and shapes its creeds and thoughts. When the Hellenes created the Epos, they were already Greeks, *i. g.* the chosen people of poetry and art. At that time Egypt, Chaldæa, and Assyria were in the enjoyment of a social organization, a political power and culture richly supplied with appliances of every kind, which seemed to place them far above those obscure Achæan tribes whose bards sang even then songs represented to-day by the two epic Homeric poems. Yet the Hellenes were, in a certain sense, already superior to those who would have looked upon them as illiterate and almost in the light of savages, had circumstances brought them together. Neither Homer nor his predecessors knew how to write. But they already could express in the fairest idiom, set off with all the resources of rhythm, those simplest, purest, and most pathetic feelings, which are as the soul's first blossom, and as such will never cease to appeal to man, so long as he remains pretty much what he is at present. Of course, among the people that witnessed the birth of these admirable fictions, the artist was as yet but a very timid novice ; he had

nothing to show that could compare with the countless figures of men and gods, whether painted, sculptured, or cast in bronze, which adorned the buildings of Memphis and Thebes, of Babylon and Nineveh. His treatment of the human figure, when he dared to attack it, was clumsy in the extreme; despite it all, Grecian imagination thenceforth descried and in a manner mentally blocked out those types which statuary was later to endow with a real and concrete existence, as it modelled its figures in marble and brass; these types owe to their noble character and infinite breadth to have outlived the old world and of imposing themselves on modern plastic art. It is well known that Pheidias turned to Homer as to a fount of inexhaustible suggestions and inspirations.

This superiority, we are told, is to be accounted for by the fact that the Greeks belong to the privileged Aryan stock, whilst the Egyptians, Chaldæans, and Phœnicians are more or less pure Semites. Peoples of the Aryan family, it is affirmed, have alone created mythologies, both grand and varied, the true fountain-heads whence the epics and the noble arts sprang; they alone at a subsequent period gave proof of aptitude in science and philosophy. Such sweeping assertions as these are very much open to question; but this is not the place for discussing them. We may be allowed one observation. The Greeks are not the only people of that family who, in the course of ages, were placed in pre-eminently favourable climatic conditions, and whose surroundings were almost perfect. Yet they alone produced a Homer and Æschylus, a Plato and Aristotle, a Pheidias and Praxiteles. Another point—even more striking—is this: there are at this moment clans whose titles of nobility, if so they may be called, are firmly established, but whose manners and habits, nevertheless, strongly savour of barbarism. Such are the Skipetars, who are descended from the old Illyrians, and the near kinsmen of the Greeks. Between the coarse rudeness of these turbulent populations and such culture as that of Greece, many grades must necessarily have intervened; yet there is not a rung of this imaginary ladder on which, at a given time, has not rested one or other of these nationalities, ethnographically classified in the Indo-European group with a great flourish of trumpets, and among these not a few have remained far below the level reached by peoples whose name is not

enrolled in the golden book of this patriciate of the human race. When the student sits down to a careful and unprejudiced study of history, he soon perceives that systems based upon hasty generalizations fall away like castles built with pieces of cardboard.

We shall not lay stress therefore on racial considerations, to which some have accorded so much weight. They have often pointed out that nations living at great distances from one another, yet exhibit features common to all, and speak languages of which both grammar and vocabulary offer analogies with each other; from these resemblances they assume that the peoples in question have a common origin, and that they sprang from the same stock. It is a theory which holds good as far as modern times are concerned, where direct observation falls on such groups as constituted themselves in the broad light of history; but do not we expose ourselves to grievous errors if we apply the same methods to remote and shadowy ages, when nations, now disappeared, came into existence and constituted themselves? Languages have been made the principal vehicle from which peoples are classified and connected with this or that race; but, on the one hand, it is quite possible for science to be at fault respecting the affinities of this or that idiom, and on the other hand, instances might be multiplied of a mixed people, the Bulgarians for example, having been led by circumstances to adopt a speech which originally was not that of the main ethnological group to which it belonged. Then, too, how are we to choose in a contest between specialists, which has been going on for some time and is not likely to be settled yet awhile, as to the nature of the primitive populations of Chaldæa? Chaldæan culture is tossed to and fro between the Semitic race and the race to which the name of Touranian or Finn has been applied; but on what foundations do they rest either of these attributions? On texts, the decipherment of which is by no means certain, on words and shapes found in these same texts, the real nature of which has given rise and is still giving rise to impassioned and sharp discussions. When we have to deal with hoary antiquity, racial notions and classifications deduced from them hang therefore on a single supposition, a supposition which after all may, in some cases, bring no more with it than a greater or lesser degree of

probability. The true end of research, the only one really open to it, if it be determined to remain true to the rigid rules of a critical method, is not race, but rather that living unity which is the people, the nation, the body whose members are bound to one another by community of name and language, religious beliefs, associations, and traditions, the various modes of expressing thought, whether in art or literature; finally, identity of manners, conduct, institutions, and political interests.

Even granting that the racial concept is not open to quite as many objections and reserves as here set forth, still we fail to see of what help it can be to us in clearing the mystery which shrouds the genesis of Greek genius, and of an originality which is conspicuous from its earliest manifestations. Race, to take that word in the sense ascribed thereto by its warmest upholders, is to the people what genus is to the species. There does not and cannot exist in the race any characteristic which, from the first, is not met among the various peoples composing it, and each one of these possesses, over and above such attributes as have served to build up the species, a number of special qualities that set it forth from among its congeners. To know a people thoroughly well, to sound its soul's very depths, the hidden sources whence springs creative force, it must be surveyed and narrowly examined in the several phases that went to the making up of its complex existence, all the wealth and variety of those peculiar features which determine its personal being. Hence what the Greeks were on the day of their spiritual awakening, the fresh matter which they brought into a world fast sinking into dotage, shall not be demanded of the speculations of either philologists or mythologists, respecting what they call pre-Aryan language and religion, or of those Vedas which we were bidden to regard as the first spontaneous cry, the artless gush of the youthful world dazzled by the grand spectacles of nature, whereas now we are invited to see in them the well-pondered work of learned, nay almost pedantic, poets. We shall cross-question more reliable witnesses, the Homeric poems on the one side, and the monuments of plastic art on the other. Of course these witnesses will not tell us all we should like to know; but we may at least put entire confidence in such information as it will be in their power to furnish us with on the infancy of the Greek people. Like a beautiful tranquil lake, the clear

mirror of the Epos reflects back under all its aspects the image of the society which the poet had before his eyes, whence he unconsciously drew his pictures, whilst making believe that he was recounting the feats and adventures of heroes, the sons and companions of the gods. Although in these recitals are found numerous words, statements, and allusions which the Alexandrian commentators already found hard to explain or understand, these difficulties have been largely removed by archæological progress; the enormous mass of materials that has been accumulated, whose wealth daily increases, has brought systematical methods into analysis and comparison which tend to become more and more precise; whilst a catalogue of the shapes imparted to matter by the oldest inhabitants of Greece has not only been commenced, but carried very far. These shapes are studied in works great and small executed during the period under notice, be it the enormous walls of acropoles, the plans and decoration of palaces, the tombs of kings and private individuals, or the smallest fragments of armour, artistic furniture, costume, and ornamental objects for personal use. The tiniest chip of stone, terra-cotta, wood, glass, amber, or metal is carefully picked up and classified in the hope of making out the impress upon it, more or less distinctly marked, of notions and creeds, tastes and habits, which held sway when these objects were manufactured.

Every fresh shaft which is sunk deep enough to reach old deposits brings up materials out of which new series are enlarged, new ones made, and each one after being carefully labelled is presently deposited in our museums, and helps the interpretation of this or that passage of poems, that had either remained obscure or not been understood at all. The more we advance in this line of research, the more efficacious will be the aid which texts and monuments will afford each other; those texts wherein we seem to hear the warm and living speech of generations that have left little or nothing behind them, or the monuments of a nascent art which, despite its clumsiness and ignorance of many things, has already its eyes open on Nature, whose lower types at least it is at pains to reproduce with truth and honesty.

The rudest industrial products enable us to creep further back into the past, far beyond the period, already cultured after a certain fashion, when the brilliant bloom of epic poetry closely followed the growth of the art which it has been agreed to

call Mycenaean art. This it is which makes our present task even harder than that which has occupied us up to the present hour.

In face of the old Eastern civilizations, our standpoint was not that which would have been taken by one who, previously prepared by special studies, had undertaken to write the history of Egypt, Chaldæa, or Phœnicia. The one thing that interested us with all those nations was the share each had taken, in its time and in a different way, in the collective labour whose general results we were called upon to estimate and appraise; the particular burden laid upon us was to define the output supplied by each of the collaborators, the tools, appliances, processes, and types that each brought to the general fund. In order to make out this kind of inventory, we had no need to go back to the beginnings; it was enough to consider these various nations in their full maturity, when they had the command of all their means, and were nearest to the point of realizing, under every form, the ideal which they had conceived. To have pursued our retrospective inquiry much beyond the ages, sufficiently remote, whose relics we have described, might well have proved somewhat difficult. In Egypt, the latest effort in this domain of research has been the exhuming of monuments of the Old Empire; but Egypt, such as the earliest pyramids and the oldest tombs have revealed her to us, already appears constituted on historical bases, already in possession of dogmas and symbols, of writing, and an art of her own. So complicated a state of affairs implies a long past during which it was slowly elaborated, but whose final result is alone known to us. For Chaldæa this difficulty is even greater, and mainly due to inadequate excavations, carried on as they were on very few sites, and nowhere prosecuted in a systematical manner. With regard to Phœnicia, we have seen through what sequence of circumstances ancient works have been more completely destroyed on the Syrian coast than in any other country visited by us. What remains of the products of Sidonian and Tyrian industry has been largely preserved in lands whose dealings with Canaanite merchants began comparatively very late, in Greece, Italy, and Sardinia. Hence it comes to pass that we have no data by which we can ascend to the actual beginnings of their colonization, the time when these townships, which were destined to so brilliant

a future, were little more than fishing villages established on islets naturally protected by their insular situation. It may be that some day, in the Nile or the Euphrates valley, a more thorough and systematic exploration of the soil will enlarge the archæologist's range of vision on those far-off days of history; for the present, however, the darkness which surrounds them is so profound and impenetrable as to be impervious to the faintest gleam.

Very different was the case of Hellas, or if preferred, Europe. There, in the Greek and Italian peninsulas, whence culture was to expand in the interior of the continent, man did not cast off his primitive barbarism until many centuries after the day when, in Egypt, Mesopotamia, and the neighbouring countries, he had already attained a very considerable degree of culture. Here, therefore, there is no need to brush away or wade through the dust accumulated by so many generations, in order to get at the earliest objects fashioned by the hand of man, and on which he left the mark of his first essayals. The strata of débris that are found one upon the other are fewer and of no great depth. This the Hellenes owe in part to their innate qualities, and in part to the help which they found in the previous labours of their neighbours, so that they required less time in working out their evolution than the Asiatics did. With them the season of infancy was less abiding; at any rate, if we have no means of gauging its duration, we know that youth and productive manhood more quickly followed adolescence. The Greeks, if the expression be allowed, lived fast; the space that covered their years of apprenticeship and the perfect works of their vigorous maturity and perfect scientific training, was shorter than that of any other nation. Moreover our inquiry is made easier by the fact that, for the last fifty years more particularly, the Greek and Italian soil has been sounded and investigated, if not with greater zeal, at least in a more orderly and systematic manner than that of Egypt and Anterior Asia. The sites cover less ground; excavations are not so handicapped as in lands ruled over by the Turkoman: this circumstance has enabled the explorer to prosecute his labours more leisurely, consecutively, and on points that once were dependent upon one another; sometimes, as at Olympia, Tiryns, Eleusis, and the Athenian acropolis, the exhuming has been so thorough and complete as

to have laid the rock bare. This mode of operation has been so far satisfactory, that on many a spot, beneath the remains of the classic age, the simple and touching effort of the primitive artisan has been recovered. However clumsy, we feel greatly interested in this artisan; to collect whose handiwork, even the most fragmentary, rude, and insignificant, we have spared neither cost nor trouble. In him we recognize and love the ancestor of the great artists of the Periclean age, as well as that of Alexander. All these shapeless stone and clay idols, these plastered and tinted pieces, these strange jewelled objects, these unglazed chips of pottery with geometrical decoration, every one of them, all that recent discoveries have brought out, at great cost, of shafts sunk at Troy, Tiryns, or Mycenæ, what else are they except the first links in the chain at the end of which are found the statues of Pheidias and Lysippus, the vases of Euphromios and Sosias, the paintings of Polygnotos and Zeuxis, and the intaglios of Pergoteles? It would be impossible therefore to withhold our interest from works which in their precession of masterpieces prepared the budding forth of these, in that they all were the offspring of the same mind, and as it were the same bosom, just as the flower is in the bud, just as the first leaflets that open the ground in which the seed was put, already contain the whole future plant. The burden laid upon us is to bring within the range of our vision, in all its integrity, the long series of notions and essayals the final result of which was to make the Hellenic artist so supreme a master of execution, that he could make light of difficulties arising from stubborn materials, bending them to his will, and compelling them to be the faithful interpreters of thought. This is why, having undertaken this research, we are obliged to go on until we reach the goal, the stone and bone age, the age of pottery made by the hand unaided by the circular table, ill-baked in the open by means of the irregular heat of faggots.

Those who have been led by the natural bent of their mind and training to make classical studies their favourite pursuits, can scarcely help having their eyes and faculties dazzled by the poetic and artistic splendours of Hellas; they need make an effort in order to realize that time was when the Hellenes were mere savages. On this head doubt is no longer possible: the tribes whose manners and daily life we may guess from the lower strata of

dwelling at Hissarlik and Tiryns, must have greatly resembled those which modern travellers found settled in the islands of the Pacific; the implements of both are nearly identical, and answer to a very similar social grade. At first sight it is hard to admit the possibility that the wild tribes of the Ægean had aught in common with the builders of the Parthenon; but we must needs surrender to evidence. Barely forty years ago the history of the Hellenic race was wont to open with the unexplained marvel of the Homeric poems; revelations and recent archæological surprises have lengthened the background of that history by many hundred years, whose tale is not yet complete, but in whose vague and dim light we descry intermediary stages of activity, awakenings after seasons of rest more or less prolonged; briefly, the whole series of advances parting primary barbarism from relative civilization, such as they are shadowed forth in the *Iliad* and *Odyssey*. Once this conviction is borne home to the historian, he feels it to be his duty to make out a list of such monuments as are specially distinctive of each of these onward stages; but he is open to the following danger. If from over-conscientiousness he loiters among shapeless sketches, he exposes himself to the risk of wearying the reader. This is by no means the least difficulty of our self-imposed task. We must at one and the same time forget nothing important or characteristic, yet avoid long descriptions, and multiplicity of typical images, whose specimens are repeated with wearisome monotony, distinguished as they are by differences so slight as to be almost imperceptible. Our aim is to observe a "golden mean." We would request those who have been good enough to follow us in our long journey, that they do not permit themselves to lose courage just as they near the end. We are quite as impatient as they may be to reach at last those monuments that were the outcome of a full-grown art, glorified by the divine light of beauty. But we beg them to remember this one fact: the untutored hand whose tentative efforts are about to pass under their eyes, is a Greek artificer's hand, the direct ancestor of those pre-eminent artists whom they admire. The whole question resolves itself into this: is their love for Greece great enough and deep enough to stand the test of accepting with reverence all that comes from her hand, finding nothing amiss as they listen, bent over her cradle, to the first babble of her genius?

There is yet another difficulty inherent to the subject which will have to be met. The men of the Periclean age were farther removed from the beginnings of Oriental culture than they are from the nineteenth century. The work entrusted to Egypt and Chaldæa was almost done when the Greeks began to cast off the outward semblance of barbarism and rose to a spiritual life. Established in the vicinity and as it were the boundaries of the Asiatic world, they could not fail to profit by the intellectual activity of their elders: this is to say that they were brought under their influence. In dealing with Egypt, the order in which styles and artistic forms succeeded each other in that country was sufficiently accounted for by reference to the general laws which preside over the development of the human mind. The case is different for Greece. In trying to make the reader understand why her evolution was so rapid, and account for certain peculiar phenomena by which she is characterized, considerations other than these will have to step in. There is reason to ascribe a great deal to alien example and teaching; but as written documents almost entirely fail for the period when this action was most effectually exercised, it will not in every instance be an easy matter to determine the point of departure or the direction taken by these currents, nor to estimate their living force. Are we to view the Ionic column whose volutes already appear curling round the flanks of Cappadocian rocks, amidst bas-reliefs bearing graven upon them signs of Hittite writing, along with those standing or seated statues of archaic style whose aspect so vividly recalls, at first sight, that of the works of the Egyptian sculptor, in the light of transmissions and intentional imitations, or of mere chance, to be accounted for by the fact that the human mind is pretty much the same in every clime, and that when it has reached a certain age it nearly everywhere bears the same fruits, provided the conditions of environment in which it is placed are not too wide apart? These are delicate questions that will not infrequently perplex us, until we come to the period when Hellenic genius assimilated all the elements it had derived from foreign sources, and fused them all in its own powerful and original crucible.

The difficulty of how to choose amidst so prodigious, so bewildering a wealth of monuments specimens for examination and classification, will complicate our labours and make them

harder. Egypt alone gave us a foretaste of this difficulty when we were called upon to examine the long period over which extended her civilization, along with the preserving qualities of her warm, dry soil; in reality however a limited number of types sufficed to represent the whole movement and the whole effort of that art. The special features of Egyptian art are by no means monotony and unmovableness, such as at one time an ill-informed criticism was inclined to ascribe thereto; at the same time it was neither so deeply transformed, nor did it strike out into so many different paths at once as Hellenic art. Excavations, whether in Chaldæa or Assyria, have not by a long way yielded so large a crop as those carried on in Greece and Egypt. Had they however been as productive as in certain parts of Assyria, the number of pieces that would have repaid reproduction would be exceedingly small. Amazingly strong though it was, the art of Mesopotamia was very limited in its means of expression; it was given to much repetition. This applies in full to Persian art. Phœnicia invented still less; to bring forward a long series of examples so as to define the processes of her mercantile eclecticism would be superfluous. There was no real difficulty in any of these cases, except that a certain measure of tact and proportion was required. On the other hand, time has dealt heavily with the work of other nations, such as the Hebrews, Hittites, Lydians, Phrygians, and Carians, important portions of which have almost been entirely destroyed. Here our anxiety was of another kind; the burden laid upon us was to gather together all the monuments that had been preserved, so as to form them into groups that should exhibit as complete a tale as possible.

How different is the case when we turn to Greece! No historian, let him assign ever so great an extent to his work, can, even in his dreams, imagine the possibility of making it complete; so rich was the fancy of that gifted people, so skilful was it in translating its notion of beauty, which held so large a place in its existence, into a thousand different forms, not to speak of countless precious relics of which the soil of Greece and Italy has been despoiled, during the last three hundred years, by people of taste or of an inquiring mind. Let anybody enter one of our great museums, the Louvre for example, and at the very threshold he will give up the notion, if he ever entertained

it, of reproducing in its integrity the monuments of any one series as absurd and vain. To take at random a section of antiquities, here are the painted vases. The whole tale of fictile products exhumed up to 1844 did not exceed 40,000; yet at that time scarcely any other were known, save such as had come out of the tombs of Etruria, Campania, and Apulia: how much larger must not the number of these figures have become since they began to find vases elsewhere, in Venetia, the Æmilia, and beyond the Italian peninsula in Sicily, Cyrene, and finally on the continent and the islands of Greece, where by far the finest of all were wrought.¹ Were a list made out of all such monuments in this category as present points of real interest, whether from the painted subject, elegance of form, qualities of draughtsmanship, or choice of colours, the number would exceed several thousands. It is plain however that, even in a work that should be exclusively devoted to a history of ceramic art, the single principal types which the industry of the Greek potter created could only be represented by a very small number of specimens, and would necessarily leave out of account secondary varieties. Owing to the habits of the Hellenic potter, his disinclination to repeat twice, nay, even once the same object, these varieties, it is not too much to say, are well nigh as many as the pieces themselves. If for example in a collection, it matters little which is selected, we examine the vases that came out of the same workshop, we shall find that no two specimens are exactly alike in every respect; though bearing a general resemblance to one another, slight differences will be manifest here and there, be it in outline or the details of the decoration. The same impression of infinite variety is carried away, whether our observations fall on terra-cottas, jewellery, bronzes, or marbles. So deeply seated with the Greeks was their dislike to repetition, that workshops exclusively engaged in industrial products seldom resorted to mechanical aid for reproduction, which is so extensively employed by our trade. Like the sculptor and the painter, the artisan preferred to trust his own fingers in manipulating the material he had learnt how to model, and infused into it something of

¹ According to M. E. Pottier's catalogue, there are about 6,700 vases in the Louvre, counting those of the Cabinet de la Bibliothèque nationale, and the Ceramic Museum at Sèvres; the total number of vases in the public collections of Paris is estimated at 10,000, Berlin has 4000, and Naples about 3000.

his own personality, making it unlike any other piece. It is hardly an exaggeration to say that there are as many plastic entities, if the expression be allowed, as there are works due to Hellenic genius in our museums.

In such conditions as these, the work of selection to which we must presently apply ourselves has in it somewhat of a painful nature. When, for each period, each school, each art-section, we have gathered and grouped together a large array of monuments, all of which on some plea or another are worthy of attention, we shall have to make up our mind what we should discard, with the not pleasing prospect that every specimen thus omitted will be held up to us in scorn as proof of our want of taste and thoroughness. Yet what are we to do? If a complete tale is out of the question, far more so is a complete reproduction. A very small number of images will have to suffice in conveying some notion of a long series of monuments. On the other hand, we pledge ourselves to sparing no pains in order that these images shall always be faithful, and look as if well chosen, and above all best fitted to represent and make manifest the special characteristics of a technique or style. We dare not hope that our choice will in every instance meet with the approbation of the critic. More than one will express astonishment at the absence of such monuments as he knows best, which by reason of the study bestowed on them have become his particular pets; he will feel aggrieved and bear us a grudge for what he may consider intended as a personal slight. For the most part, valid reasons might be adduced to justify the line we have taken; but even when plausible reasons could be put forth against it, we beg the reader to suspend his judgment ere he taxes us with ignorance.

It may well be that a monument of real value has dropped out of our notes; but this, we are not afraid to say boldly, will be the exception not the rule. When, as in our case, the notion of writing the Art-history of Greece has been the day-dream of our life for the last twenty years, whose preface has already appeared in five volumes, and whose first lines we are even now inditing, when, in view of this work, we visited all the great European museums that we might keep ourselves well informed as to excavations and the march of archæological science, what

we are afraid of are less lapses, always to be deplored, than a feeling of being weighted by documents, and a certain inability to making up our mind to necessary sacrifices.

The Country.

The nations whose history we have surveyed up to the present hour, occupied territories which Nature had sharply parted one from the other. What we understand by Egypt is the lower portion of the long Nile valley, where, bounded by the Mediterranean and the two mountain chains of Arabia and Libya, are grouped all the monuments of her people. The growth of Chaldæo-Assyrian culture went on in the spacious basin of the Euphrates and Tigris. The scene is more vast; yet its boundaries are no less well defined; in the north by the Taurus range and the prolongation of its eastern masses, eastward by the powerful Zagros rampart, southward by the Persian Gulf and the wastes of Arabia and Syria. Phœnicia proper was that narrow strip of land inserted between the sea and Lebanon; the latter forming the mountains of Ephraim and Judæa in the south. The whole cycle of Hebrew art was confined to a much narrower area, within the walls of Jerusalem and its small kingdom. This by no means makes up the number of the territories which we had to traverse in order to follow, from the banks of the Orontes to the shores of the Ægean, the trail of those Syro-Cappadocian tribes that left behind them, as marks of their passage, very peculiar rock-cut sculptures, accompanied for the most part by signs of the ideographic writing, the employment of which preceded in that part of the world the use of alphabets derived from the Phœnician; nevertheless the centres whence these types spread to the West were Northern Syria and the uplands of Asia Minor, between which free intercourse could always be carried on through the passes of Amanus and Taurus. Some hundred years later, the great peninsula which in the west prolongs and terminates Asia, received from Europe, through the Bosphorus, new batches of emigrants. Among these the Phrygians first occupied the land which stretches between the Propontis and the chain of Sipylus, then the high and craggy table-land where the

Sangarius, Hermus, and Mæander have their beginning. The Lydian kingdom expanded around the middle course of the Hermus, whilst the Carians established themselves in the hilly district which lies between the Mæander and the thick wall-mass of the Lycian mountains. These throw out a bold arc around Lycia, making it one of the best fenced countries in the world, one of those which, from the fact that they are more or less completely isolated, seem destined to work out their independence and keep it. Persia stretched away on the Iran plateau, at least that part of it which is on the march of Susiana and Mesopotamia.

The various peoples whose monuments we passed in review in the first part of this work were not content to sway their nearest neighbours with their intellectual superiority, but they likewise brought nations dwelling far apart under their ascendancy. Each constituted however a compact mass, having its seat within a sharply-outlined region of the African or Asiatic continent, whither we had to transfer and fix ourselves for a season, that we might define on the spot the genius and the work of each nationality. The Phœnicians alone counselled a different method: the starting-point of our study in regard to them was their own home, situated on that Syrian coast which had been the cradle of their trade and industrial prosperity. Our stay there was brief: we followed these traders beyond the seas, to their colonial empire on the African shore, to their factories sown from one end to the other of the Mediterranean, to every strand where their keels thrust deep in the sand, opened their sides to let out goods of every conceivable description, whether intended for luxury or common use, which a gaping and wondering crowd gathered on the beach was eager to purchase. Whilst we thus followed on the track of those adventurous skiffs, stopping where they stopped and touching land where they did, we picked up many a curious antiquity which most opportunely came to fill lacunæ in the series made out of the spoils taken from the great mother-cities; these however, first Sidon, then Tyre, and afterwards Carthage, remained for many centuries the real organic centres of the Phœnician world, the centres that drew to themselves and received all the products of the "inhabited earth," as said the Greeks, to distribute them afterwards among the nations; in many instances having previously transformed them and affixed on them their own trade-mark.

Tyre succeeded to the supremacy which Sidon had lost in the eastern basin, along with all its traffic; when this division, which had been brought about by the force of circumstances, was finally settled, balance was maintained, the lordship of the Semites underwent no change, and life continued undisturbed until the day when the star of the race began to wane, when Tyre fell to Alexander and a Greek city rose on the African shore, when Carthage, driven from Sicily, then from Spain, finally disappeared amidst the flames she herself had kindled.

This was the end. Before that, however, more than a thousand years had elapsed, during which the workshops of those cities repeated the same types, with the mechanical facility of an industry which does not derive its inspirations from an art vivified by a vigorous and intense life. The artificer, at different dates, found it easier to turn now to Egypt, now to Chaldæa, sometimes even to Greece, for his models. Accordingly we must not expect to find here either gradual modifications of style as would naturally follow on a normal development of the plastic faculty, or local schools, in every one of which would have been disclosed this or that natural tendency of creative force. To use the language of trade, the retail of articles which the Phœnician sold to his customers was pretty much on the same pattern; nor was there much difference between the goods, whether they came from Tyre, Sidon, or Carthage. Geographically, the extent of Phœnicia appears very large, scattered as it is over a vast area, more especially when we come to the bold flights and brilliant successes of Carthage; but if we look narrowly into the real state of affairs, we shall find that the sum of her activity was centered in one single effort, which brought with it neither variety nor true progress. The testimony of the map then is unreliable and misleading: all those cities dashed with the colour affected by the Queens of Canaan are no more than factories and storehouses, to which the term of branches of the main firm might be aptly applied. Viewed from our standpoint, the whole useful labour of that enterprising and laborious race consists in a skilful eclecticism which Sidon, the eldest daughter of Phœnicia, was first to practise, and whose tradition was taken up and continued by Tyre and Carthage to the last hour of their existence.

The case is different with Greece. Greece is in truth multi-form and many-sided, both in space and time. Geography and

history alike apply this name more particularly to the country which bears it to this day, the easternmost of the three peninsulas which Europe projects in the south and seems to send out to meet Africa. It was this very small tract of land, now constituting the possessions of King George, which the Hellenic race long ago elected as its dwelling-place for all time, though often ravaged by invasions and conquests. There, though fated to be much given to disperse itself abroad and send out young swarms to spread where they could, it has ever maintained itself more compact; there, too, the cities that played so brilliant a part in the Grecian world and strove for supremacy and the direction of affairs, Corinth and Sparta, Thebes and Athens, came into being and lived their lives; there, finally, were celebrated those Isthmic and Nemæan games which served to gather together the dispersed sons of Hellas. Hellas, as this peninsula is designated, is Greece properly so called, pre-eminent Greece; by her side are other Hellas which, although they could not boast so central a situation, or to have played so commanding and continuous a part, were none the less sharers in and contributors to her glory. There is, first, Asiatic Hellas, whose happily-constituted sons, with the brilliant pliability and go which characterize the Ionian race, were more precocious than European Hellas; she it was who inaugurated poetry and art, commerce on a large scale, and distant navigation. Then there is African Hellas, the Hellas of Naucratis and other cities,—peopled by Greek mercenaries, introduced into the country by the wars of Psammeticus,—whose situation lay between the mouths of the Nile; but above all, the Hellas of Cyrene and its territory, with its powerful townships protected against Egyptian lust and Carthaginian jealousy by a sandy belt. This oasis, whence caravan roads started in every direction towards the interior, was a gate opened on the mysterious depths of the great southern continent; through this opening a curiosity ever on the alert gathered many a data by which the boundaries of the inhabited world were enlarged, and more exact information was obtained in regard to the different races of men and climes. On the opposite shores is yet another Hellas, Western Hellas, running fringe-like along the bays and headlands of Southern Italy, and pushing her outposts to the mainland of Gaul and Spain. To her befell the honour of being Rome's educator. It is no part of our present story to say to what degree of power and

prosperity rose cities such as Posidonia, Cumæ, Cortona, Metapontus, Sybaris, and Tarentum, even Adria and distant Massalia. The architectonic and sculptured monuments found on the sites of not a few of these colonies, as well as those that come out, from time to time, of their ruined temples and tombs, are quite as beautiful as those that sprang into being on the soil of the mother-country. Finally, between these several Hellas, forming four distinct groups on terra-firma, each with a distinct existence of its own, and a no less separate destiny, is a whole Hellas, insular Hellas, floating as it were on the "broad back of the ocean." This is Sicily, stretching between Italy and Africa, Sicily on whose soil the struggle which was waged between the Hellenic and Phœnician element—whilst influencing each other—was carried on for more than three hundred years. To this Hellas belong the islands of the Hadriatic, looking both towards their mother-country and the Italian peninsula; then, south and east of these, on the path to Egypt and Asia Minor, Cythæra and Creta, the Cyclades and Sporades, Rhodes and Cyprus, Samos, Lesbos, and Chios, the islands off the Thracian coast, and many more, both small and great, all those lands fantastically scattered on the waters, which a graphic and picturesque pen has likened unto stepping-stones that children had dropped in shallow water to enable them to reach dry-shod the opposite bank. Men and merchandise, unwrought and manufactured goods, divine simulacra, together with the notions and sentiments they embody, industrial processes and plastic types found there, at all those halting- and resting-places, stupendous facilities for circulation and transport. The archipelago, or rather these hospitable archipelagoes, were the happy meeting-places where contacts productive of inestimable good had their being; where the Greek first met folk of another speech and land, then folk of his own stock and language, but of other tribes.

The race that worked for itself so enviable a situation on the borders of Europe, Africa, and Asia, is one of the most richly endowed, perhaps the most highly endowed, that has as yet appeared on the globe's surface. Other great nations, the Egyptians and Chaldæans, after a brilliant season, remained stationary; from a certain date in their history, they confined themselves to repeating the forms which they had invented in the first period of their activity. As to the Phœnicians, they

were content to adapt both to their own needs and the taste of their foreign customers, elements borrowed from their neighbours, industrial processes which they perfected and made their own. In some sort or another, these several nations had finished their work ages before they lost their independence; but their life was ended, for they had ceased to bring forth, and only endured through a long agony.

Greece, on the contrary, never ceased to advance; at any rate she never remained still. Even when as a Roman province the stock of her original inventions seemed exhausted, she did not give up on that account, but still toiled upwards after a new birth, and to a certain extent she succeeded. True, she can no longer produce Homeric poems, nor the Lesbian and Theban ode, nor the Attic drama, but she devotes herself heart and soul to the cultivation of science and history. She takes up higher criticism, and turns back to her old philosophical systems that she may widen and know them better; the framing of the Christian dogma is mainly her work. In the domain of plastic art, if a Pheidias or a Praxiteles, a Polygnotos or a Zeuxis, is no longer born to her, she has still architects who, without imitating the Ictinoses and Mnesicleses, produce masterpieces; however high above all others we may put classical forms, who would not admire the basilicas of Ravenna and the noble nave of St. Sophia?

In the history of the human mind, no organic development is more familiar than that of the Grecian mind, and instinct with a greater fund of wealth and simplicity. Its most conspicuous characteristic is this: despite enormous distances by land and sea, parting the various countries in which important Hellenic populations constituted themselves, this progressive march or evolution, broadly considered, was everywhere governed by the same laws, whether on the mainland or in the islands where the Greek language was the mode of speech; everywhere the main phases succeeded each other, if not in periods of equal duration, at least in the same order and in very similar conditions. If the growth was more rapid at one place and slower at another, the fact remains that its season of youth and creative power were more abiding. Elsewhere, happy beginnings were ere long followed by old age and sterility; or mayhap some disastrous accident, such as the invasion of Campania and Apulia led by Sabellian tribes, which suddenly arrested the natural course of life.

It may be said that notwithstanding these variations and unevennesses, the mode of expressing thought among the various sons of this race, at one time or another, went through the like changes. They were trees of the same species, bound to yield the same fruits. In truth, the colour and taste of these fruits ran some danger of being modified in the course of time by the transforming influence of the widely-different soils to which the trees were transplanted; if too radical a change was happily prevented, or at any rate kept well within bounds, it was due to the close relations which were sedulously kept up between all the scattered sons of the same mother, the Greek men of Hellas, aye, even with those of the most distant cities. The peculiar configuration of the Asiatic and European peninsulas, whose coasts are all turned towards each other, and whose headlands stretch out like so many arms to meet others, helped not a little to bring about this desirable end. The mariner sailing from the eastern side of Greece to the Ionian coasts never for a single moment loses sight of land. Some few months ago, I left Athens one evening for the Dardanelles. Our night run was along the shores of Attica. The cape of Sunium was soon left behind us, and the first morning rays revealed the fact that we were already crossing the strait which parts Andros from Eubœa, and presently that zone of the Ægean where islands become more rare, and as a consequence free spaces are more frequent and broader. I looked ahead: and watched, emerging from the waters, first Psara, close to Chios, then Chios itself, and to its rear the sombre-looking cape of Mimas, which on the west fences in the Bay of Smyrna: we recognized the Asiatic coast. I turned round to cast, if possible, a parting look towards that Hellas whither I had journeyed after many years' absence. It had vanished; but to the left was Skyros, its nearest neighbour, and right away beyond it, bathed in the white light of the young day, rose the snowy pyramid of Ocha, Eubœa's highest peak. These prominent facts of geography were a direct challenge sent out to the dwellers of all those Asiatic and European coasts to engage them in adventure, inviting them to come and visit them. How was it possible to resist the temptation of pushing out to sea, to investigate and conquer all those lands whose distant peaks and headlands dimly appeared on the horizon? No danger was to be dreaded in launching a boat in quest of the unknown, even if

overtaken by contrary winds or becalmed on the road. Whilst making for the opposite shores, the man at the tiller looked wistfully for and never failed to find on the same spot the coasts whose outlines he knew so well. If this time his heart misgave him, all he had to do was to turn her head, and ere long he would regain the anchorage which he had left but a few hours since. But at the first opportunity, with kinder skies and greater confidence, he would again venture on the voyage, and emboldened by many essayals, finally reach the goal.

The Phœnicians had great merit in being even better sailors than the Greeks. Facing the Syrian coast is a broad expanse of sea, open during the greater part of the year to all the winds that blow from the west and south, agitating and swelling the waters into waves. Here are no friendly islands, seemingly placed as land-marks on the briny way for the very purpose of affording timely rest and shelter to men worn out by stress of weather. Along the whole line of coast were no havens, until they began to construct and run far out into the sea moles to keep out the surf from anchorages and roadsteads, insufficiently protected by the point of some cape or rocky islet, the remains of cliffs which wintry storms had undermined and destroyed. How widely different in outline and aspect are the coasts of Hellas, Thrace, and Asia Minor! The Hellenic peninsula divides itself lengthwise into two masses of unequal importance, but about even in breadth, Central Greece and Peloponnesus. Either mass, the first on its eastern and western flanks, the second on the west, more especially to the southward, is further split up in secondary peninsulas, some of which, Magnesia and Argolis for example, sharply bend at right angles, somewhat after the fashion of a broken limb, or sweep round and break at the edge into indescribable irregularities, with sundry deep sinkings between the projections of a hilly shore. No gust of wind penetrates the many windings of these straits, whose waters are ever tranquil; in fact the whole extent of coast is but a continuous line of shelters and natural havens; now consisting of indentations and inlets of the sea, which run far inland on this rocky shore; now they are mere bends and curves affording little shelter, but whose sandy beach, with gentle upward slope, seems to invite the mariner to run in his boat, that he may stretch himself on the soft, warm bed. At other times the coast is

broken up into vast basins, such as Piræus, whose sole communication with the main is by a narrow gullet, in which hundreds of ships can ride at anchor in all weathers. Moreover, the most part of these havens, great and small, open on large bays already fenced in by surrounding heights against the action of the prevailing winds; there are even some, the Pagasæan and Ambracian Gulfs, notably the Corinthian harbour, which are so well closed in that, although high winds and a disturbed sea may rage outside, their existence is hardly suspected within. I know not if there exists another country in the world where sea and land mingle with such frequency and by so many different ways or so intimate a fashion, where for man's sake, so to speak, it makes so many advances to gratify his instincts of curiosity, or of lust, or roving for roving's sake. As soon as they were provided with the necessary tools for hollowing the trunk of a tree into a canoe, the inhabitants of such a country could not fail to grow familiar with the ocean; they learnt to trust it, they demanded of it the means for opening up relations, first with their next neighbours, then with more distant folk; in a word, with all those whose approaches were, as said their poets, "by the watery ways." When the Greeks with the epic poems make their first appearance in recorded history, they are no longer timid mariners for whom a voyage across the Archipelago is a matter of concern; some have already pushed their boats to distant Egypt and the still more distant shores of Sicily. Hellas has suffered many an ill turn of Fortune's wheel since those far-off days, but even during those centuries of greatest misery, she never broke her old compact with the sea. Everybody is aware of the importance which her trading navy occupies at the present day in the Mediterranean.¹

The very peculiar configuration of the country, broken up into crags and fantastical shapes as that of no other peninsula of Southern Europe, doubtless inclined the Greeks to lend a willing ear to the call of the sea; that sea which, the better to reassure and attract them, seemed to soften its voice and lay aside its angry moods, as it glided in and out of the islands and promontories to the very heart of Hellas. To call Greece a hilly country is a misnomer. The whole of Greece is but a huge

¹ Strabo already points out the advantages to be derived, and the destiny awaiting Greece, by reason of her peculiar coast-line, the hilly and varied nature of the country, its numerous headlands, havens, peninsulas, and islands.

mountain, whose several peaks have each a name; a gigantic mountain with a most complex construction, which in places bulges out and expands into parallel or divergent lines of mountains, whilst elsewhere it contracts into a single thick wall. Innumerable ravines scar and fashion its sides; deep breaches pierce its often craggy walls and part the principal masses, whence spurs strike out in every direction, slanting away to the sea-shore, where they rise in sharp and steep needle-like masses. No elevated and spacious table-lands greet us here, as in Central Spain; neither do we find a broad valley to be compared with the Pô valley, which by itself constitutes almost the whole of Upper Italy. Thessaly alone has plains of some extent. Everywhere else the name is applied to narrow spaces squeezed in by surrounding hills, which die away in the mass high and low: such would be the Bœotian and Attic plains, or the flats of Argos and Sparta. A land which makes such calls on man's activity as soon as he steps out-of-doors, obliging him as it does to perpetual ascents and descents, offered no great temptation to the dwellers of any two inland districts to visit one another. What an immense advantage and relief at the same time, to have the sea near at hand, which would enable them to betake themselves wherever they pleased on the coast, provided they learnt how to steer a boat and handle an oar. Hence it came to pass, that in order to make the most of this natural resource, the different clans which built up the Hellenic nation were led to group themselves, and so to order their settlements as to have an outlook on the sea, making the establishment strong, keeping a watchful eye on its approaches, guarding it by ramparts, running up "long walls," as they would say, to connect it with the chief centre, situated more or less inland. Every one felt that to allow the town to be cut off from the sea, was to deprive it of the air of heaven and doom it to certain death.

The Arcadians are almost the only Greeks who chose their seats in the very heart of Peloponnesus, and thus found themselves for ever parted from the sea. The want of it is apparent throughout their existence. They felt no great interest in spiritual concerns; their share in the progress of arts and letters was feeble; they were looked down upon as people who, in the human race, had somehow lagged behind. If later they followed, at a distance, the march of civilization, this in part was due to the fact

that their sons, as mercenaries of foreign powers, saw a great deal of the outside world, in part to their being surrounded by states in full possession of the benefits which the proximity of the ocean brought with it. Without outlooks towards the sea, it may be questioned whether the Aryan tribes which occupied the Hellenic peninsula would have progressed beyond the lawless, semi-barbarous stage of the modern Albanians, who are tossed to and fro and spend their strength and activity in petty feuds. If ever the natural lot of a country was fated to have its population parcelled up into an almost indefinite number of divisions, wherein what is termed "clan" dominated, that was assuredly Greece. It is made up of a number of compartments in touch with one another at their base; to get out of them one must needs now toil up steep mountain sides, now struggle through the windings of narrow lochs, often rendered impassable by the overflow of torrents after storms of rain; or one is obliged to cross passes some of which are blocked up by snow during the winter months. Each individual group seems doomed to perpetual isolation, or rooted and spell-bound to the valley in which it has established itself.

Wherever man finds himself placed in such conditions as these, a broad, fruitful, and national development, one likely to play a great part in history, is not to be expected. If here matters turned out quite differently from what might have been looked for, it was owing to a special physical characteristic, which acted as a corrective on the effects of the general configuration of the ground. These compartments or boxes, if the expression be allowed, had but three walls; they lacked the one which would have shut out the sea from them, and so deprived them of a clear open field on that side. Through this open window, then, were commenced those relations which along the mountain lines, interposing like partition walls between the several commonwealths, were at all times fitful, difficult, and rare. The sea-route permitted everything to pass; be it men, merchandise, or ideas; if a tempest closed it, it was not for long—a few days perhaps; but as soon as the wind bated and the swell went down, light, swift boats once more sallied forth on their useful mission, the effect of which was to link together, by perpetual visits to and fro and mutual borrowings, all those districts between which Nature had set an abundance of lofty barriers. The uninterrupted flow of these relations was assured by the continuity and regularity

of the winds. "The winds," writes Curtius,¹ "are the legislators of the weather ; but even they, in these latitudes, submit to certain rules, and only rarely rise to the vehemence of desolating hurricanes. Never, except in the short winter season, is there any uncertain irregularity in wind and weather ; the commencement of the fair season—the safe months, as the ancients called it—brings with it an immutable law, followed by the winds in the entire Archipelago: every morning the wind arises from the coasts of Thrace and passes over the island sea ; so that men were accustomed to designate all the regions lying beyond that of these coasts as the side beyond the north wind. Often these winds (the Etesian) for weeks together assume the character of a storm, and when the sky is clear waves of froth appear as far as the eye can see ; but the winds are regular enough to be free from danger, and they subside at sunset : then the sea becomes smooth, and air and water tranquil, till almost imperceptibly a slight contrary wind arises, a breeze from the south. When the mariner at Ægina becomes aware of this, he weighs anchor, and drops into the Piræus in a few hours of the night. This is the sea-breeze sung by the poets of antiquity, and now called the Êmbatês, whose approach is ever mild, soft, and salutary. The currents passing along the coasts facilitate navigation in the bays and sounds of the sea ; the flight of migratory birds, the shoals of tunny-fish reappearing at fixed seasons of the year, serve as welcome signs for the mariner."

Sea and winds went hand-in-hand together in the building up of Greek unity ; the only unity she was fated to know before the Roman conquest ; political and administrative unity came to her with her Roman enslaver, Mummius, who numbered her as a Roman province. "Greece," said Joseph de Maistre, "came divided into the world's being." Down to the fall of Corinth, she was divided into a number of cantons forming as many independent states, whose boundaries were traced out by Nature. The most thickly populated, energetic, and richest of these commonwealths cast about how to subdue their neighbours, and for awhile they were successful. Their chief ambition however was to become the acknowledged heads of leagues of more or less importance, which culminated in the too tardy and therefore abortive attempt of the Achæan federation,

¹ E. CURTIUS, *Greek History*.

whose statutes provided for all public and private interests on a footing of perfect equality.

A very similar parallel to this is found in the history of the Swiss cantons, save that Switzerland is an inland country. Superficially Greece is smaller than Portugal; but the turnings in and out, the bendings and windings of her shores, broken up by deep inlets of the sea, provide her with a length of coast-line far exceeding that of Spain. This omnipresence of the sea is one of the main causes by which is explained both the great part which Greece played in the world, and why that part, in kind and importance, differed from that which Switzerland was called upon to exercise. The dwellers of the Hellenic cantons met oftener; they gathered together for the discussion of affairs of state, religion, and art, on far easier terms than could fall to the lot of Tell's countrymen, ere modern engineering suspended carriage-roads over precipices, and tunnelled mountains' sides. Formerly, as many aged countrymen in Savoy and Switzerland will tell you, not a few lived and died who had never climbed the glaciers and rocky walls bounding the horizon to which their baby eyes had opened. Throughout the days of her independence, Greece had no roads deserving the name. She was indebted to her Roman masters for the first cart-roads that ever crossed her passes,—those for instance on the Isthmus, beyond Megara,—to whom tracks were so natural that they deemed no civilized country could be without them. Up to that time the Greeks had scarcely felt the want of them; if their needs required them to make a journey from Piræus to Corinth, how much simpler and more commodious at the same time to jump into a boat and set her sail to the wind, rather than toil until they were out of breath, urging and wearying their horses up a craggy hill or along the edge of precipices. Away from the plains occupying, as already observed, but a small surface of the ground, the best or at any rate most frequented paths were mule-paths; these were very similar to those that prevailed in my youth, the difficulties and dangers of which are with me now. Well-engineered zig-zag roads are the rule at the present day.

Whereas in modern as well as in ancient times it would have been hard to find, even outside regular sailors,—no insignificant class taken by itself,—a man of Hellenic birth

who, once at least in his life, had not left his native village or town for purposes either of war, business, religion, or pleasure: the two last incentives blended and joined hands together. The desire to consult some famous oracle or join festivals celebrated in honour of the great national deities, yearly set in motion thousands of Greeks, many of whom had to travel over great distances to reach their goal: from Tauric Chersonesus and the African shores, from Sicily and the Italian peninsula, even from outlying Gaul and Spain. In this old world of ours filled to overflowing, where everybody is more or less weighted by the duties of his profession or business, it is hard to realize what these festivals meant to the Hellenes, and the place they held in their existence. We may venture a guess at the nature of the conversations of men thrown together for a while; the simple matters they had to tell and hear in return; the questions and answers that would pass to and fro between relatives and friends that met after long separations, between strangers whom chance had brought together in the same lodging or around the same altar; endless questions and answers listened to with rapt attention, but now and again broken in upon by the exclamations of amazed auditors. It would have been hard to devise aught better calculated to awaken the mind and keep it on the alert, than these meetings and displacements, as also to parry the injury to the spiritual and national union which, in time, distance and dispersion were likely to bring about. Then, too, their stock of knowledge and notions were freshened up in converse with those of their brethren who, like Odysseus, "had seen many cities and penetrated the minds of men."

As to the Hellenes settled in small groups among Barbarians, in the most distant colonies, such as the oasis of Ammon, in the very heart of Sahara, after those quinquennial solemnities at Athens, Delphi, and Olympia, in which they all had taken part, they returned to their far-off seats, carrying with them the consciousness that they were more Greek than before; not in feeling only, but in thoughts, manners, and language; strengthened too, like the giant of their mythic lore, by having once again touched the maternal bosom of that land whose sons they were.

Greece was thus both self-centred and scattered; concentrated in Hellas, scattered and multiple outside her frontiers. In this

great body, intense life was found towards the heart, whence the blood flowed to the extremities, then returned to the centre to purify itself and take up such nourishing elements as made up the life and individuality of the race, imparting thereto its superior energy. It had all the mobility of that migratory wave which had sown Greek colonists in every nook and corner of the Mediterranean, but ever brought them back to the elder country, the road to which they had no wish to forget. This was not all. That sea enabled the Hellenes to continue their existence as a compact nation, despite obstacles and distances which parted them from one another; through that sea also had formerly come from the East the germs of civilization, the rites and images of deities whose public worship was destined to gather men together and make them more sociable, together with writing, metals, tools, and the processes attending the chief practical arts. The sea, and the sea alone, had put the Greek tribes in touch with the great empires of Africa and Asia, and guarded them whilst still young and weak against foreign encroachments. Relations engendered by way of the sea are suggestive rather than oppressive. The sea favours long and frequent visits, but does not lend itself kindly to invading enterprises. No great danger was to be dreaded from the Delta, in that Egypt never became a maritime power; whilst the dominion of Chaldæa and Assyria was not carried, at least permanently, as far as the Mediterranean. With regard to the Phœnicians, the object of their European expeditions was one of lucre rather than of conquest; if they rise to more ambitious designs, it will be later and in another quarter, the West. The Persian empire alone will launch naval squadrons for the subjection of Hellas; but when the threatening storm shall burst upon her, she will have reached full manhood; she will be able to oppose Xerxes with a navy commanded by Themistocles.

It is further to the south that rises the northern front of the fortified enclosure behind whose shelter the Greek tribes encamped themselves, and by the help of which they so long checked the enemy's advance; it is formed by the mountains fencing in Thessaly, whose ramifications cover the whole surface of Epirus and Western Greece. The principal gate pierced in this wall is the vale of Tempê, which is flanked by two enormous bastions, Olympus and Ossa. From Olympus, whose base dips into

the sea, strike out the Cambunian Mountains, whose bulwark-like mass stretches away to the south-west, terminating at mighty Pindus, against which it leans. Behind this is the entrenched camp of Thessaly; once in it advance to the southward is only possible by scaling Mount Othrys. Beyond this again, at the turning-point of the Lamian bay, progress is once more impeded by Ceta, which in antiquity rose almost sheer from the waters, only leaving between them and its steep sides the narrow pass known under the name of Thermopylæ.

As soon as the defile was turned or forced, the lordship of the Bœotian plains was assured; to descend however into the plains of Eleusis and Athens, it was necessary to cross the gorges of Cithæron and Parnes. Even when established in Attica, the invader's position was by no means secure; before him rose high and formidable the rugged mountains of the Isthmus, which like redoubts were set there to guard the approaches to Peloponnesus, and "pre-eminently formed the acropolis of Hellas," said the ancients.¹ This fortress had, as it were, its weirs. Advancing from Corinth towards Sparta, two lines of mountains of considerable size, with a whole array of ravines and passes, barred the way, and had to be crossed under the missiles of the enemy on the watch.

A conqueror whose uninterrupted successes had landed into the very heart of this fortified place, the farthest corner of this reduct, might not unreasonably think himself secure; yet even here his triumphant advance could be turned into a disastrous retreat in less than a few hours. Every gate he had left open in his rear might suddenly be closed against him by the folk interested in keeping them shut. "Greece," wrote Michelet, "is like a three-bottomed trap. First you are caught in Thessaly, then at the Thermopylæ and the Isthmus, and again in Peloponnesus."

It is an immense advantage for a nation to feel as safe in the country in which it dwells as in a well-built house provided with thick walls, stout doors and locks; being secured against attacks from without, it is able to turn its attention to internal improve-

¹ The expression is found in STRABO, but it was not invented by him. Curtius adduces other instances in which the expression occurs, showing the notion or imagery to have been of far more ancient date, and that the Greeks in speaking of the main divisions of their country always supposed themselves to be standing within the Isthmus, on the side of Morea.

ments. This was not by any means the sole benefit which the Hellenes derived from the very peculiar configuration of the land in which their ancestors had chosen their seats. Under these favourable circumstances they were enabled to try the experiment of municipal rule, and show the world the splendid fruits it is capable of yielding with a happily-gifted people. In this form of government, town and state merge into each other, each head centre being an organic entity whose members are all more or less interested in the management of public affairs. Phœnicia alone in the Oriental world had something akin to it. Egypt, Chaldæa and Assyria numbered great cities far more populous and richer than any, even the most celebrated, which Greece could show ; but they were mere agglomerations of houses. The countless subjects of those Eastern monarchs were more pressed together at Memphis, Babylon and Nineveh than on any other points of the territory ; they lived crowded together in tall houses, within the shelter of fortified walls ; but neither in these towns nor in the districts surrounding them did they count as the free citizens of a commonwealth, having a share in the government. Whereas Sidon, Tyre, Utica and Carthage were republics, independent commonwealths, animated during hundreds of years with a vigour, activity, and patriotism truly admirable ; yet, brief would be the list of Phœnician townships which played a part of any importance in the world's history ; moreover their thoughts were too exclusively turned towards a single object, the acquisition of wealth, to enable us to judge of this form of government from one specimen only. Far larger was the number of Hellenic townships. The sequel of this history will show how, from the eighth to the third century B.C., life throughout the Hellenic world was at once intense and scattered ; and what innate activity, organic power, and force of expansion were manifested in all these small commonwealths, dispersed as they were from the Euxine to the Pillars of Heracles, all over the Mediterranean shores. Then, too, the superior culture of the Hellenes imparted a dignity and variety to their free institutions which Phœnicia had never known. Minds which here were solely engrossed with how best to add to their gains, there became enamoured of the beautiful and true in life ; letters, philosophy, and science aroused reflection in them and speedily matured their intellect. Rhetoric placed eloquence at the service of private and public interests or wrongs

which, supported by considerations of general import, gave dignity to party strife. On these platforms the attention of the spectators was ever fixed; on it the politician, artist and poet, the writer and orator, each in turn was called upon to act a part; and the consciousness of being ever in sight stirred him to the most stupendous display of energy. Nor was this all. The like spirit of emulation was manifest among all these cities, at once sisters and rivals, not one of which willingly submitted to play a subordinate part; each aimed to rise to the standard of the best, however high that might be, so as to share in the honours that were theirs.

The most distinctive and essential peculiarity of the Greek nation, we may boldly affirm without seeming to ignore what has been attempted by others in this department, the action of all others more especially Hellas' own in forwarding ancient culture, is the foundation, the creation of the township or city. The relief of the ground, its being split up into fragments, brought the "civitas" into being; the nature whether of soil or climate operated most happily on the human plant, *la pianta uomo*, as Alfieri has it. Then, too, the land here concurs with the sea, that sea which entirely encircles it, to the development of robust and pliant bodies, of minds both alert and wishful to learn. No calling is better calculated than that of a seafaring life to harden and fit the body to every kind of hardship; it trains a man at the same time, through uncalled-for perils to which the most cautious and experienced may be suddenly exposed, to self-reliance and stoutness of heart. Finally, his mind is stirred by unwonted scenes which fall under his observation to note with greater precision peculiarities in things and men, changes in time and surroundings. The vast majority of the Greeks, either from their special calling or the frequency of their voyages, had lived more or less on the sea and received the kind of training which it confers on its devotees. Here, moreover, class differences were not so trenchantly marked as in other countries, whilst on the quiet and more habitually stay-at-home people influences were brought to bear scarcely distinguished, in their effects, from those experienced by the seafaring folk, whether traffickers or fishermen. Here the geographical configuration of the soil is not uniform, as in countries where great stretches of low ground alternate with mountains of

mean altitude. The whole land is made up of contrasts, thanks to lofty ranges which, close to the shore, rear their peaks towards the sky. A few hours' walk takes the tourist from the proximity of undying snow to the region of the beech and pine, to tracts where the lofty palm sways his head in the breeze, laden with fruit which in Messenia reaches perfection. The quality of the vegetation is not the only factor in bringing about variety of aspect; other features, equally distinct in their opposition, are due to the distribution of the waters. The bottom of the greater part of the ravines is nothing but stones and gravel rolled there, a yellow belt along which tamarisks and laurels grow in profusion; but for this narrow green strip, which in June and July is dyed with red, no one would suspect the presence of a rill silently filtering through its pebbly bed. Elsewhere, however, on the western slopes of Hellas, are found clear torrents, which, like the Neda, abound in diminutive water-falls, amid oaks bent over the abyss; others, such as the Ladon, flow with full stream, beneath the deep shade of ancient planes whose branches stretch in an intricate entwine from bank to bank. Progress is sometimes impeded by such rivers as the Achelous and Alphæus, which cannot be forded even in summer; whilst Peloponnesus owns a lake, the Phenæus at the foot of Cyllênê, which in small calls up to mind the Swiss lakes. Nevertheless water is scarce and of inestimable value, and serves to explain the worship offered to nymphs that presided over springs, and why plastic art was at pains to lend them a form whose beauty should answer to the honours that were paid to them.¹

Hence the endless disputes to which the smallest thread of running water gave rise among the Greeks; to prevent which charters, regulating the division of the priceless liquid between the land-owners, were drawn up and placed under the authority of the law. The twenty-four hours of the day and night were divided and apportioned between the proprietors, and severe penalties

¹ Scores of small Hellenic towns suffered in the dry season. Prudential considerations had counselled their remaining on hill-tops; the nearest spring was often at a considerable distance in the valley below, whence the precious liquid had to be fetched in amphoræ carried on the shoulder, descending or ascending a steep mountain path or steps cut in the rock. When the dwellers of these towns were cut off from spring water by an enemy encamped before their walls, they had to put up with the brackish water of wells or cisterns, which were apt to dry up after a short time when the winter rains had been scanty.

enacted against any person convicted of defrauding a neighbour, in momentary possession, of his rightful quantity of water. The decemviri were said to have brought from Athens to Rome the whole portion of the laws of Solon which dealt with this matter.¹ By these salutary regulations, barren plains, such as those of Attica, were transformed, at least in places, into fertile fields and gardens.

The marked difference of organization which meets us on crossing from the high valleys to the sea-shores, from districts turned towards the Archipelago to those in sight of the Ionian sea, from tracts open to the sea-winds to land-locked valleys, is no less notable in regard to the climate, and borne home with peculiar force to the most casual tourist. I have good reason to remember the ascent, towards the end of March, of the Parnon range on my way to Laconia, and the difficulties, nay, actual dangers which I had to encounter in crossing the passes. I came near to being lost in a snow-drift along with my horse and belongings. The path to Sparta, where I arrived two days after, was through undergrowth ablaze with golden broom and snowy whitethorn, with here and there patches of blushing wild roses and honeysuckle which filled the air with their perfume. A day's ride had brought us from the depths of winter to the full tide of spring. In the islands however, and around the bays, difference between the mean temperature of warm and cold seasons is slight enough; whereas, in the interior, in secluded valleys such as those of Thessalian Penëus and Lake Copais, freezingly cold winters are succeeded by scorchingly hot summers. Storms are frequent all over Greece during certain seasons of the year, in the lowlands and the hilly districts alike. Towards the evening the mountain tops are suddenly shrouded in thick dark clouds, and by and by the roll of thunder is heard in the distance; tropical rain falls for two or three hours; then a northern blast sweeps away the mist; a radiant sun reappears, and even those on whom the deluge has discharged itself would scarcely credit the testimony of their senses, but for the swollen torrent below, whose bed had been dry for months, but which now, with full stream, tumbles its turbid waters charged with grasses and broken timber.

There are countries, the lower valley of the Nile and the

¹ The like regulations, whether imported by the decemviri or not, are still in force throughout Italy; save that penalties are practically non-existent.—TRANS.

Euphrates basin for example, in which simplicity of construction, uniformity of lines bounding their horizon, have ruled the regularity of the seasons which succeed each other like the beats of the pendulum throughout the extent of those vast territories. Wherever climate and soil are so constituted, points of difference between one man and another must necessarily be of a trifling character; the minds and dispositions are pretty much alike, in that they all do the same thing at the same time and in the same way. *Per contra*, in lands where, as in Hellas, the soil so to speak wears a hundred faces and the sky has many moods, where a descent of 2,000 metres, easily performed in one day, takes one from the hoary summits of Parnassus and Taygetus to the flowery meads of regions turned to the south, where, too (on the same spot), a sudden blast causes the thermometer to fall fifteen or twenty degrees in two or three days, constant calls are made on bodies and minds alike, for inuring and adapting themselves to these unlooked-for changes of level and bounds of the thermometer, to complex and mobile conditions of surroundings, so rapid in their changes as often to set at naught well-pondered previsions.¹ Within a very narrow space, men of the same stock and speech, dwelling close to one another, lead very different lives, according as they inhabit mountain ranges or lowlands, elevated pastures or slopes proper for cultivation, or strips of land along the sea-shore. As soon as a man leaves one of these zones and enters another, he is obliged to forego some of his former habits, to add to or take somewhat from his dress and mode of living; and again, under the stimulus of necessity, he has to lend himself to the exigencies of his new surroundings, whether of things or men, amongst which the ups and downs of life have thrown him, learning and practising a handicraft other than that by which he had hitherto earned his living. All these facts stimulate the organs of the body and give elasticity to the mind, which finds itself compelled by hard reality to find on the spot the means of action, such as the circumstances of the case may dictate. These are not uniform for all, and their play gives rise to divergencies which leave their marks on the individuals, no less than those already put there by Nature itself; they tend to

¹ The thermometer has been known to go up at Athens, in the month of March, from nine to twenty degrees in four days (VIDAL DE LABLACHE, *Des rapports entre les populations et le climat sur les bords européens de la Méditerranée*).

accentuate divergence of inclination, and thus enlarge the number of types whose vigorous relief and originality of features stand out from among their less favoured fellows.

With the people whose country we have just described, everything was calculated to help on the growth of individual energy, and bring into existence beings capable, by foresight and decision, to withstand tyranny or fated doom. On the other hand, a land where cultivation is carried on by tilling a fertile soil, made productive by periodical rains or inundations whose recurrences may be looked for and predicted almost to an hour, the husbandman's work is terribly monotonous and mechanical. True, his body hardens as he bends his face to mother-earth, exposed to the extremes of heat and cold; but there is nothing to awaken or stimulate the mind in a round of duties which are everlastingly the same, the order of which is known beforehand; then, too, the minds of men so engaged are prone to slumber and become dull, so that the intellectual sluggishness of the rustic, more especially he who wields the plough, has become proverbial. True, Hellas also had her husbandmen; but lands that could be tilled occupied a very small area, and did not yield grain enough for the needs of the population. When this increased, corn had to be imported from foreign lands, from Tauric Chersonesus, Asia Minor, and Egypt.

Flats of any extent were rare; with unspeakable toil, therefore, they strove to bring under cultivation the steep sides of their hills and ravines. What was denied to the ploughshare was obtained with the spade and hoe. By means of these implements many a plot of rye or barley appeared between the gaps of the rock. But very poor was the yield wrenched from the stony ground. The dwellers of this land found compensation in tree- and shrub-culture. Painfully and in the sweat of their brow they everywhere planted, even on the most craggy slopes, the walnut, vine, and olive. A notion may be gained as to the enormous amount of labour required and the comparatively small result of this kind of culture, by a visit to the south point of Laconia, now called Maina, where for thousands of years, unmolested by foreign invasions, it has been uninterruptedly carried on. The mountains which throw out to the southward the lofty mass of Cape Tenerus have almost perpendicular slopes which descend to the sea; these are divided into multitudinous, long,

narrow terraces rising one above the other from the slender strip left by the rocks on the shore, up to the proximity of the summits. One by one the boulders were dislodged, and the stones thus collected used in the construction of walls in talus whose function was to support these narrow belts of earth. Around the foot of every olive a basin or ditch was dug, kept clean, and re-dug several times during the year; when the heavens were unusually forgetful in filling the basin, the dearth was made good by water brought to it, sometimes from afar, from cisterns—which preserved the priceless liquid until late in summer—placed at stated intervals, or from rare sources gushing out of some fracture in the rock, between two plane trees.

The number and complication of the appliances, the untiring efforts needed in tree-culture, are easily realized by any one who has watched the peasants at work, whether on the Illyrian and Dalmatian coasts, or the shores of Liguria and Provence. But how soon the accumulated labours of past ages in tree-culture would perish, were they not constantly renewed by the generation which has received them, fully detailed and as an inheritance, can only be understood by a somewhat lengthy sojourn in lands where this kind of culture is practised. When at Vitylos I became the guest of the Mavromichalis, the descendants of the ancient beys of Maina; the long spring rains, which that year had been specially copious and destructive, had just come to an end. With the downward pressure of the waters, more than one sustaining wall had given in, carrying in its fall the earth which it supported. Of course what they precipitated into the sea was irretrievably lost; but many a point at the edge of the rock, or boulders and coarse gravel heaped up high at the bottom of the ravine, had kept the earth in place and prevented its fall. When I arrived, all the hands on the estate were out and busy: the men in running up the talus afresh, the women and children toiling up the mountain, in the already burning sun, laden with dorsers full of earth, which they strove to put back in the field whence it had been removed. We may boldly assert that every shovelful of soil found on these terraces has thus travelled many times to and fro over these declivities in the course of ages. Apart from this yearly and general repair which the havoc wrought by wintry weather makes necessary, partial devastations have to be made good after every

summer's storm. Often, under pelting rain, ditches are dug to regulate the precipitous course of the waters, now turned into veritable water-falls; and breastworks are hastily thrown up to stem in the flood and save the ground-plot. As will be easily guessed, the husbandman of this land must be furnished with great tenacity of purpose, a quick eye and cool head, so as to seize the right moment when to act in unlooked-for danger; never relaxing his watchfulness in the struggle he has waged against a poor soil, and the violence and disagreeable surprises which Nature may have in store for him. The battle he fights is never won. True, he has the better in every encounter, but only on the condition that he never lays down his arms; a passing downheartedness, a moment of forgetfulness, would lose him all the fruit of his precious toils.

In the out-lying valleys of Boeotia, Arcadia, and Crete, the struggle, though assuming another shape, has always water for its cause; water, for which parched mother-earth vainly sighs for long months, and which in its superabundance, when at last it comes, is fraught with a new danger. Plains are of mediocre extent; a mountain belt encircles them on every side, leaving no apparent egress for melted snow and rain. Lakes of considerable size and depth would thus be formed, did not the waters work their way through subterraneous passages which they have opened for themselves, carrying them to the sea or low grounds. These whirlpools are known in modern Greece under the name of *καράβοθρα*.¹ The plain may be partially or entirely brought under culture, according as the mouth of this kind of gutter is found in the rocky wall or in the hollow.

All would be well if the over-plus water were drained with anything like regularity. This however is not the case. Broken branches and loose coarse grasses often collect around the orifice of these conduits, obstructing them more or less completely; the news is soon spread abroad, and the inhabitants are seen flying to the scene of the disaster, where the waters now rise rapidly. I once saw in Crete, Sphakiote highlanders standing up to their necks in water, and striving, hooks in hand, to clear the mouth of one of these channels, whose outflow was stopped

¹ The *καράβοθρα* of Morea have been described by M. MARTEL under the title, *Les Katavothres du Péloponèse*, 8vo, Delagrave 1892, extracted from *Revue de Géographie de Dapeyron*.

by an accumulation of leaves and twigs. There are times however when all human efforts are unavailing; when for example the trunk of a tree or a huge stone has got in the water-course. Then, for a whole season, sometimes for years, the waters slowly but steadily ascend; there is no telling what might happen did not their tremendous pressure work the desired remedy, by sweeping away the obstruction one fine morning. Then the sheet of water begins to sink, and the submerged cornfields gradually reappear. But new troubles are in store. Land boundaries have either been displaced or lie buried under loam and gravel, where attempts are made to discover them; the recollections of the bystanders are appealed to, but these are often vague and made to serve personal interests. When after much wrangling the contending parties have agreed to some sort of arrangement, they set to clearing the ground of the mud and stones with which it is overlaid, and drains are dug to facilitate the drying up of the sodden earth.

At the time of my visit to the hamlet of Phonia, its inhabitants were engaged in a very similar job to that described above. The rising of the lake had been going on for close upon twenty years; but a week before our arrival the aperture of the conduit had suddenly been cleared, when the Ladon, which before was no more than a runlet, was suddenly turned into an impetuous stream, whilst the lake level was fast sinking. As we listened to the villagers' story, and what this lucky accident meant to them, the elders, surrounded by a large noisy crowd, walked along the muddy fringe left by the flood, where each was intent upon finding out his own ground-plot. The elders meanwhile heard all the parties, and tried to settle amicably the disputes brought for their arbitration.

Even on spots where the waters were not imprisoned within rocky barriers, man's interference was needed in many ways, either to stem them in or direct their flow. Embankments had to be constructed at those points of the rivers where they otherwise would overflow fertile tracts; whilst swamps left between mountains and sea, in front of the sandy and pebbly delta formed by the torrents, were drained. Vainly did corn struggle to grow amidst thick jungles of reeds and bulrushes, out of which arose marsh effluvia which played great havoc among the surrounding population. Hence tradition attributed

the honour of having opened a free outlet to stagnant waters, and thus put an end to hot-beds of fever and pestilence, to heroes, the offspring of the gods. In saying that Heracles had slain the Lernian Hydra, the ancients showed that they had preserved the real signification of the myth; in their language it meant that the swamp which poisoned the whole district of Argolis with its deadly fumes had been drained.

The sudden changes of temperature which meet us in crossing from one district to another, or at different seasons of the year, the sharp contrast between inland and coast climate, are no small factors in making the race strong and hardy. Many children fall a victim to these climatic conditions; infant mortality in Greece is proportionately large: we have no reason to think its having been otherwise in antiquity. Bodies capable of enduring and adapting themselves to such contrasts as these, acquire in the training rare elasticity and power of resistance. To the warm sickly Scirocco, charged with vapours and apt to unnerve the most strongly built, there succeeds a searching north wind which has often become icy cold in its passage across the Thracian plains. Cool breezes, whether they are sought among the hills or found in due time on the spot, will give the body its former tone, which the excessive heat of summer has somewhat impaired. As a rule the air is very dry; there are districts, such as Attica, where the vapour contained in the atmosphere is extraordinarily feeble. The absence of moisture causes the contraction of the pores of the skin, the hardening of the flesh, and the acceleration of blood circulation, whose rapid flow excites the nerves and keeps them at work. Hence the Greeks were freer than other mortals from all that hinders and oppresses the motion of the mind. Fleshiness and fattiness of body were no less rare. The nation whose existence was destined to be passed amidst such influences as these, will have no need to load its stomach with animal food, or demand of stimulants the means of battling against low or very damp temperature; like all southern people, more or less, it is sure to be abstemious; moreover its poor soil will not fatten large herds. His staple diet therefore will mainly consist of milk, bread, vegetables, and fruit. An abundance of fish he can almost take up with the hand out of every bay and creek of his sea, whilst the rocks which form his coast

are lined with shell-fish; all of which he will largely partake, in that in a relatively small volume they contain the largest amount of nutritive elements. Trained by a double necessity of climate and poorness of soil, in height this people will rarely surpass the right mean; and very few of its men will reach the lofty stature which is of common occurrence with northern nations, accustomed as they are to a more substantial diet. Yet thanks to their avocations, most of which will be carried on in the air and light of day, thanks to the variety of services which will be required of their bodies in the eternal struggle whose main points we have described above, thanks to the selection in infancy of the fittest and the merciless discarding of the weak and deformed, though of medium stature this people will rejoice in strength and symmetry of limb. In despite of the continuous effort which Nature has laid upon the men of this race, they will be light-hearted, because called upon to spend their lives in resplendent light. Greece, which Virgil visited late in life, seems to have been in his mind when he described the Elysian Fields and the place assigned to the Blest in the following words—

Purior hic campos æther et lumine vestit
Purpureo . . .

✓ Of the countries lying around the Mediterranean, very few can match the Hellenic peninsula in the almost perennial serenity and brilliant azure of her sky. The stifling breath of the desert does not, as in Egypt, shroud the inhabitants for days in its whitish, dull atmosphere; so thick is it as to be impervious to the sun's rays, shutting out from the vision all but the nearest objects; when it reaches Hellas, the gritty particles it holds in suspension have been lost in its passage across the sea. Again, here, the rain season of spring and autumn is shorter, notably on the eastern coast, than in Tunisia and Algeria. At Athens there is scarcely a day in which flashes of sunshine, if but for a few minutes, do not force their way between the clouds. The marvellous transparency of the air invites the eye to sound the depths of the horizon; it endows the visual sense with a reach and nicety which would be impossible in a country where all the outlines are bathed in vapours which repel his curiosity. The eye is trained and habituated to study distant forms, to

compare and measure their distance ; it thus acquires precision of sight and a fine feeling for the exact relation in which the different parts stand to each other. These are qualities which, when they shall be applied to the interpretation and reproduction of the living form, will make the Hellenes the greatest artists the world has ever seen. / Unconsciously they will introduce into their future plastic works the natural characteristics which the radiant light diffused in space renders visible even from afar. Here and there, these landscapes are not wanting in charms and beauties of a different nature, in well-watered dales for example, or some sheltered nook where luxuriant and delicate foliage fringes the very water-edge ; but even when they lack such graces as are inherent to vegetation, stateliness and nobility of form is never absent from them. The dearth of trees on many a spot causes the foreground to be confessedly dreary and dull ; for it is only broken by a stunted growth or a grey, calcined, stony, broad expanse ; in this pictorial scene, however, the far distance is always admirable. Behind the near mountains are seen others, and behind these again others still, rising on the opposite banks of bays and arms of the sea, which is ever in sight, no matter on what point of the coast or even inland, in the clear space which passes opening on the plains have hollowed out for themselves, we take up our position ; the number of mountain lines will further increase if we ascend a hill of any height. Their contour is not smooth and rounded, as is the case of mountains covered with grass and timber up to their very tops, the Vosges for example. Here, on the contrary, the limestone everywhere comes to the surface ; the mass has been wrought by time into distinct sharp crests, needle-like peaks, and indented summits. Generally, the lines of this terrestrial architecture are so fine and harmonious, that one is tempted to think them traced by the hand of an Ictinos or Mnesicles. Here masses are set on either side of the plain in almost symmetrical fashion ; mere differences and contrasts are productive of a no less happy result. This is true of the Attic plain. It opens to the southward on the Æginetan bay, with the incomparable vista of its varied islands and the distant hills of Peloponnesus, whilst to the northward it is bounded by Pentelicus, whose triangular shape might seem an exact copy of the frontels with which classic art adorned its temples. To make the

resemblance more complete, acroteria, in the shape of strongly-marked swellings of the ground, occur at either extremity of the base. The proportions are identical; difference only is found in the dimensions: this broad and noble tympanum rears its summit 1,126 metres above the sea. On the sides of the space fenced in by Pentelicus and the coast-line of Piræus and Phalarus, with its sinuous curves, the long rocky wall of Anchesimus, twice broken through, faces the more imposing mass of Hymettus; whilst loftier and more compact Parnes rises in the north-west corner, its rounded head overstepping all its fellows: unlike these, however, it is precipitous, and deep gorges scar its sides. In this grand architectonic arrangement, Parnes supplies the picturesque element, and thus opportunely corrects what might appear as too distinct and regular in the other divisions of the picture. I know of no panoramic view whose characteristics so readily sink and dwell in the memory with such abiding force as these. As was remarked somewhat earlier, until the other day I had not revisited Attica, where formerly I spent three years, which number among the dearest recollections of my life; yet after over twenty-five years I could, with eyes shut, more easily call up its image and picture it to myself than the Roman Campagna, to which during this lapse of time I journeyed more than once.

I would not be understood to say that Greek architects turned to their mountains and rocks with the notion of taking them as models—Pentelicus assuredly did not suggest the thought of placing a frontel over the entablatures of their façades; but may we not assume that the natural shapes of their landscapes, and the distinct physiognomy of their hilly and broken ground, had something to do in biassing their mind and forming their taste? Again, in their decorative scheme of colour, one guesses subtle and occult counsels, mysterious exigencies of light, so as to admit differentiation of the several members of the edifice and bring out the details of ornament. Under that almost perennial clear sky, there is an abundance of light which is diffused and reflected everywhere, even in the parts that remain in shadow; in outline these are by no means as firm as those parts which are but indifferently lighted; by themselves therefore they would be inadequate to model and accentuate a profile. Vast and light-toned surfaces, upon which the sun's rays fall directly, send them back to the eye in so great an abundance as to dazzle

and hurt it; wearied and confused by this excess of effulgence, it can no longer distinguish with ease the real dimensions of objects presented to its observation. On the contrary, deeper tones, inasmuch as they absorb a greater number of rays, soothe the retina and do not deprive it of the faculty of making out, even in the splendour of a noonday sun, the quality and solidity of substances. The effects and advantages of this intense colouring were brought to the notice of the Hellenes by certain aspects of the land in which their intellectual growth was effected. At first northern eyes, accustomed to see their own land everywhere clothed in a thick mantle of grass and forests, are apt to open wide and be repelled by the brown and bare aspect of this landscape. It is as unlike the plain of Lombardy as it is possible to imagine—this is green everywhere and in all directions, green as far as the eye can reach; yet after its own fashion it is no less richly, I would go so far as to say, very delicately tinted. It has, above and around it, the azure of sky and sea, the one more tender and constant, the other more intense and apt to pass, in a short space of time, through every shade of colour, from deep violet to light green, according as the sky is overcast or serene, according as the flood is lulled asleep or shivers and darkens under the freshening breeze, and is presently furrowed and silvered with foam. This intense blue, with all its gradations of colours, is the dominant note in the gamut, the main tone round which semi-tones are gathered; trenchantly relieved against the exquisite softness of the background are the fine grey or metallic reflections of the olive, of the holm oak and laurel, whether their light branches are outlined against the sky, or fringe a wide expanse of sea along the rugged coast. Celestial blue and sea blue blend equally well, both with the dazzling white of snow-capped mountains or the creamy white of the sandstone, streaked here and there with red and yellow, whether glorified by the sun's rays or due to the presence of iron and manganese oxides. Igneous rocks, with their more sombre hues, are of rare occurrence in Hellas; serpentine however is found in Argolis, and the Thanian peninsula is but a trachytic upheaval; but fine porphyries come from Laconia, notably the eastern slope of Taygetus.¹

¹ The *porfido verde antico* of the Italians, of which Roman architects made so large a use in their buildings, is a variety of the Laconian porphyries; quarries of it have been discovered hard by Levezova.

The colours of this rock, nearly always bright and varied, are seen in great masses above ground; their effect in the landscape is that of a richly-coloured decoration, put there in a broad grand manner by a master-painter. This concert made up of tints becomes still more harmonious and brilliant when oak and pine forests lean against marble walls, or when, out of a moist cleft in the rock, there bursts forth a wealth of greenery such as is only seen in southern latitudes, in the neighbourhood of some spring which summer itself is powerless to quench. If the shapes, in some sort monumental, and the sober and severe colouring which everywhere greet us on Grecian soil, helped on the progress of the arts of drawing, the actual composition of the rocks that make the land what it is, was no insignificant factor in bringing this about. As these rocks became disintegrated, they formed on many a spot excellent plastic clay, equally suitable to supplying the mason with bricks and tiles or complacently lending itself to be modelled by the potter or carved by the sculptor's hands; such rocks as preserved intact their hardness and compactness, everywhere furnished the builder with materials of unequal value, but all of which, with a little care, might be made to serve his ambitious needs. The fact that in many localities limestone was the sole building material he had to hand, taught him to overlay it and conceal its defects under a coating of coloured plaster. In the future he will receive a different kind of teaching from fine stone, such as that quarried in the neighbourhood of Piræus; then will be formed the habit of aiming at precision of cut and fineness of joint, of imparting rhythmic arrangement to his units and firm accent to his mouldings. It is on account of these merits that a fragment of Hellenic wall, kept in its place by overgrowth, has a certain inherent beauty of its own which appeals to everybody with a feeling for order and able to appreciate finish in work. These qualities will be carried further when he introduces a much finer grained material, marble, into his buildings; a material he will handle with reverence, conscious all the while that none of his intentions, not a stroke of his chisel, will be lost upon it; marble will give him a taste for nicety of manipulation which he will carry to the extreme of perfection in the works destined to grace his own Acropolis at Athens, of which all experts are enamoured. Then, too, marbles are not all of one colour; sooner or later their

multitudinous and varying hues will be brought together. Thus from the fourth century B.C. architects often employ the grey marble of Hymettus in their buildings, where we are sure always to find it in the same sections ; where, too, its deep tone is strongly relieved against the lighter stone of Piræus,¹ and the blocks wrenched from the sides of Pentelicus. A time will come when art will discover, in the juxtaposition of different materials, a means for renewing its strength and youth.

If on certain spots of Hellas a superabundance of marble induced the architect to make as free a use of it as elsewhere he did of stone, its greatest services to art were undoubtedly those it rendered to sculpture, and which it is impossible to over-estimate. Without marble, Greek statuary would never have risen to what it was, in the hands of masters who from the sixth century B.C. began to attack this material, and ere long found out its transcendent superiority over all others, in that it lends itself far better to a sincere presentation of all the fine shades of the undulating outline and lithsome movements of the human form. Granted that the natural intelligence of the race and the conditions of its surroundings did much to assist the rapid progress made by sculpture from henceforward in all the workshops of the Hellenic world, it remains true that the greater factor was marble. Marble, and marble alone, taught the artist to discard frigid or hard and heavy make, inseparable from wood and soft limestone, to which a long past had habituated him ; it furnished him with the means of imitating nature more closely and with greater truth than heretofore, that nature which he was beginning to regard with fondness and sympathy. Statuary marble is met on more than one point of Greece ; Scopas found it in Peloponnesus, close to Tegæa, almost ready prepared for carving the figures of the frontels and friezes with which he adorned the temple of Athêne Alæa ; Mount Pentelicus, in Attica, is but an immense block of marble. From the Cyclades comes the Parian marble, the finest and most luminous of all, whose golden and softly resplendent crystals better than any other image forth the warm tones of the human flesh.²

¹ In the rocky mass lying before Piræus is found the stone which takes its name from the harbour.—TRANS.

² A complete list of the marble quarries of Greece will be found in the very exact and instructive dissertation of G. Richard Lepsius—a son of the eminent

On the other hand, Greece is poor in metallic ore. In antiquity the mines at Laurium alone repaid the labour of quarrying them; they supplied the Athenians with lead and silver in considerable quantities. There are traces of gold in some of the islands, where it is thought that formerly the Phœnicians picked it up; but the lodes being very poor, they were soon worked out. Tin, iron, and copper are equally rare.¹ It may be that this dearth had its advantages, inasmuch as the tribes which formerly divided this territory among themselves could not carry on the business of life without them; they needed them for personal and domestic uses. The excavations at Mycenæ and other evidence prove that semi-barbarous clans set great store by gold, and will recoil from no hardship or even danger in order to obtain it. Their soil being destitute of it, they had to import it from strange lands, together with the humbler but no less necessary metals; the burden thus laid upon them contributed not a little to awaken in these nascent commonwealths a taste for traffic and enterprise. From the outset it inclined them to give the stranger a friendly welcome, the Phœnician trader, whose ships brought this indispensable commodity; whilst later it was to stimulate them to fetch it from Thrace, Asia Minor, Syria, and Cyprus, from countries in fact whose soil contained these precious substances, or from emporiums to which they were brought by trade. Dependence of any kind is a bond of unity; the one thing to be guarded against is to see that this bond which links two individuals or two nations together, does not dwindle for one of them into an oppressive vassalage or marked subordination. Here, no such danger was to be apprehended. We have shown how, by its situation and geographical configuration, the land which we have

Egyptologist—excerpted from the *Abhandlungen*, Berlin 1890, entitled *Griechische Marmorstudien*, 4to, Reimer. The enumeration and description of the chief marbles employed by Hellenic architects and sculptors is followed by a catalogue indicative of the material out of which were made a certain number of the statues deposited in the principal museums of the kingdom, whether at Athens or elsewhere. A second appendix supplies useful information in regard to the use which Hellenic architecture made of native marbles.

¹ Veins of oligistic iron are reported from Parnon, near Hagios Petros; the eastern coast of the bay of Laconia consists of ooze which Time has turned into a rock of oxidized iron. It does not appear to have ever been touched (CURTIUS, *Peloponnesos*).

described was eminently fitted to shelter and support the halting steps towards culture of the nation that should first settle and entrench itself in it, as behind an impregnable stronghold. To prove how well founded were these forecasts, it will suffice to recall in a few broad lines what is known and what is divined of the early history of tribes which, whether under the name of Hellenes or Græci, were called upon to play so important a part in the world.

The People. Its History before the Dorian Invasion.

Greece is turned towards the rising sun. The eastern coasts are much more deeply indented and hospitable than the western. Epirus and Ætolia are nothing but a crowd of rocky ridges marshalled out in serrated ranks, and of narrow defiles which leave insufficient space for a foot-path between them. The coast is unbroken and forbidding. How vast the difference in everything which meets us on the other side of Pindus! Here are the spacious plains of Macedonia and Thessaly, approachable by the Thermaian, Malian, and Pagasæan bays. The like contrast is found lower down. From the mouth of the Gulf of Patras, the sandy hills that form the coast of Achæa and Ælis round off and split up into arrow-like masses, affording absolutely no shelter to ships; whereas Attica and Argolis are favoured with a coast having numerous safe roadsteads and harbours, such as Piræus. To the south and south-west jut out far into the sea the more rocky peninsulas; here, too, islands cluster in greater number than anywhere else; so that, compared with the Ægean, the Ionian sea looks almost empty. The house, if the appellation be allowed, has not only its front turned towards Asia, but all its doors and windows open on that side as well; in front of them are thrown, as so many stations and bridges, the Cyclades and Sporades.

Given the peculiar distribution of outlines which mark the peninsula, we may expect that the history of its early inhabitants will turn out to have long been little more than the tale of their relations with Anterior Asia. As a matter of fact, neither tradition nor monuments warn us as to any influence having been brought to bear on Hellas in those far-off days, whether

by Italians or other Western peoples. It was quite the other way about: as soon as Hellas became civilized, she used her interference in diffusing her culture in the West.

On this head there can be no room for doubt; but what remains obscure is the route which the ancestors of the Hellenes took, when they came and spread themselves among the valleys and slopes of Greece. Did they come in canoes which, aided by the wind, they propelled from island to island? Or did they make their way by land in their descent from the Thracian plains? Tradition ascribed an important part to the populations of Thracia, which it led across Pindus on to Bœotia and Attica, carrying with them the cult of the Muses. Of the Dorians, too, it was told that they had dwelt in the savage valleys of Cœta, whence they had forced their way into Central Greece and Peloponnesus. On the contrary, all we know of the Ionians shows them as a people, whether in Asia Minor or Hellas, settled by the sea-shore, and whose migrations, whatever their point of departure, were effected from one side to the other of the Archipelago. If this was so in the early beginnings of history, during that period in which figure nations whose names at any rate have been retained, why should things have taken a different shape in those ages preceding it of which no record is left? Why from that time should not some of them, already skilful in handling an oar or managing a sail, have chosen in preference sea-routes, whilst others, moving along the great ranges, scaled one after another the cross lines of mountains, and entered the land, then still deserted or thinly populated, through passes and narrow defiles as yet open to all?

The Greeks had no recollection of a time when their ancestors inhabited a land other than theirs; they looked upon themselves as *autochtones*, *i. e.* sprung from the soil which carried them. This belief flattered their vanity. But the amiable myth, dear to their hearts, has been completely upset by philology and comparative mythography. If these youthful sciences have firmly established any one fact, it is the original parentage of the Hindus and Iranians on the one hand, and of the Greeks, Italians, Celts, Germans, and Slavs on the other. The languages spoken by all these nations, spread on so vast an area, that is to say from Central Asia to the shores of the Atlantic, are too

near one another both in their vocabulary, their flective and derivative modes, to permit us to see in them mere coincidences; for coincidences could not account for the fact that these nations, though parted by enormous distances, possessed in common divine names and myths of a very peculiar character. There may be divergences of opinion as to certain minor details among scholars who have gone into these matters, such as the starting-point and final separation of these tribes; but the primitive unity of what is called the Aryan family is a point which nobody disputes now-a-days, and there is a common consensus that in this family the Greeks and Italians form a group which stands out from other groups by closer affinity of idioms and religious conceptions.

Though the Greeks had no reminiscence of migrations spreading over a long time which had led them to Greece, they yet believed that they were forestalled in the country by a people which they designated under the name of Pelasgians; an active, restless, and industrious people which had prepared the soil for them by clearing its forests, draining its morasses, and blasting its rocks. In the time of Herodotus groups of Pelasgians were still found at Samothrace, in the adjacent islands, and in Greece proper. Their spoken dialect was unlike Greek; but the scholars of that day were not qualified to give exact definitions in regard to this idiom, and the sole monument which apparently has come down to us is but a short fragment, a few words from an inscription. This curious text has raised interesting conjectures; by itself alone, however, it is insufficient to permit us to determine with anything like certainty the nature of the language. The most authoritative historians, such as Herodotus and Thucydides, whilst they lay stress on the slight resemblance observable between Pelasgic and Greek dialects, are inclined to believe that no real difference of race existed between the two peoples. They are disposed to see in the Hellenes, tribes which through some sort of natural selection came out of the Pelasgian stock and rose to superior culture.¹ It is a highly probable hypothesis. Nowhere do we find, either in a mythic or historical form, the faintest echo of a religious strife, such as would have taken place had Pelasgian gods been superseded by Hellenic ones. The

¹ The most affirmative passage is the following: Τὸ Ἑλληνικὸν ἀποσχισθὲν ἀπὸ τοῦ πελασγικοῦ (HERODOTUS, i. 58); again, i. 60: Ἀπεκρίθη ἐκ παλαιτέρου τοῦ βαρβάρου ἔθνος τὸ Ἑλληνικὸν ἐόν καὶ δεξιώτερον.

supreme deity of the Hellenes is invoked by Achylles under the name of Pelasgian and Dodonian Zeus.¹ Thus, first Homer, then scores of later writers, bear witness to the fact that the worship of Zeus at Dodona was a Pelasgic worship, that Pelasgians were the founders of this famous sanctuary, and that Greek piety ever remained faithful to its shrine, even when more sumptuous temples rose at Olympia and elsewhere. The claim of the Dodonian oracle on the people's regard was of a kind which had nothing to do with magnificence; it could boast a longer past, having been famous when the others were not; hence the belief that he assuredly would be more inclined to hear and grant the prayers of the faithful where first a house had been erected to him. Besides the Epirotes, other nationalities had kept green the memory of the Pelasgians. Traces were held to exist of their passage in many districts of Hellas, Attica, Arcadia, and Argolis. At Athens more especially, around the Acropolis, was shown a wall roughly built of unsquared stones laid in mud, and still visible in such places as were uncovered by tufa or marble coatings, recalling to the mind the ramparts at Hissarlik and Tiryns. This was the Pelasgian wall; and recent excavations, by removing the sod down to the rock, have laid bare considerable fragments of it, and thus taught us what was the nature of works which the Greeks attributed to the Pelasgi. The Pelasgians were reputed to have been skilful builders; and it may be that this is the signification of the word *Τυρρηνοί* or *Τυρσηνοί* which we find sometimes added to or substituted for the appellation of Pelasgi; its root contains a vocable common to Italians and Greeks. True, it is not employed in literary language, but it was retained in certain local dialects of Hellas, whilst Latin preserved it in the word *turris*.² Hence they ruled that "Tyrrenian Pelasgi," or "tower-builders," was one and the same thing. On the other hand, in the form *Πελαργοί*, storks, which is met with now and again, it is impossible to see aught but a posterior allusion to the repeated and distant voyages of these tribes, whose steps tradition followed from Thrace and Peloponnesus, to the northern coast of the Hadriatic, and the very heart of Central Italy.

¹ Ζεῦ ἄνα Δωδωναῖε, Πελάσγιε (*Iliad*, xvi. 223).

² The forms *τύραις*, *τύρρις*, *τύρρος*, *τυρρίδιον* had not escaped the lexicographers. PHAVORINUS, s. v. *τύρσεις*.

The trail of the migrations and spirit of enterprise which marked these Tyrranian or Tyrsenian Pelasgi, is held to have been discovered in the Egyptian annals of the New Empire. According to these documents, the oldest extant containing, if not a precise date, at any rate materials for an approximate chronology, these Tyrsenian Pelasgi would be no other than the Toursha, who early in the reign of Ramses II. landed on the African coast, and allied themselves to Libyan tribes in order to attack Egypt. They were repulsed, but they returned and renewed their onslaughts, once under the reign of Menephtah I., the successor of Ramses, and again in the day of Ramses III.¹ If this theory be open to doubt, there seems to be no reasonable ground for refusing to identify the direct ancestors of the Greeks, the Homeric Achæans, with those Aquaïousha, who once at least figure among the "sea-faring people, or people from over the sea," as they are called by the Egyptians, against whom the Pharaohs of the Nineteenth and Twentieth Dynasties had to stand up in many a hardly-fought battle. The Aquaïousha are mentioned once only in Egyptian records. In the fifth year of the reign of Menephtah, they again invade Egypt in concert with the Libyans, Toursha, Leka, Shardana, and Sakalousha. The allies were beaten at Prosopis and obliged to evacuate the Delta.²

The very frequency of these invasions furnishes us with the clue as to their point of departure; the fact that the Aquaïousha could thus invade Egypt whenever they pleased, suggests the notion that their home was some island not very far off, where they could be quickly informed of what went on in the Nile valley, and of the circumstances which might seem to favour an invasion. The nearest lands to the Egyptian coast, and therefore the best points for observation, were Crete and Cyprus. It may well be that the armed ships which so repeatedly menaced the safety of Egypt, started now from one now from the other of these islands. Be that as it may, unquestionable documents testify to the fact that three or four

¹ DE ROUGÉ, *Extrait d'un Mémoire sur les attaques dirigées contre l'Égypte par les peuples de la mer* (Revue archéologique, n. s., 1867).

² *Menephtah's Inscription*, i. 2, 14 (DUEMICHEN, *Hist. Inschriften*, t. i., or MARIETTE, *Karnak*). Cf. MASPERO, in *Zeitschrift für Ägyptische Sprache und Alterthumskunde*, 1882 (*Notes sur différents points de grammaire et d'histoire*).

hundred years at the very least before the *Iliad* and *Odyssey* came into being, tribes bearing the names which the earliest traditions and the Homeric epic ascribed to the ancestors of the Greeks, were already dispersed among the islands of the Ægean, and probably also on the coasts of the mainland turned towards it, and that even then they could reckon on a number of men sufficiently large and fully equipped to boldly launch ships on the main, not fearing to attack the mighty Pharaohnic empire.

Oriental documents from another source, but whose authenticity is no less firmly established, *e.g.* Hebrew writings, likewise attest that at the time of their recension the Greeks were already massed in great numbers in the north-west corner of the Mediterranean; true, their witness bears upon a much later period than that of the Egyptian texts relating to the Aquaiousha, but it is older than the introduction of writing in Greece, older in any case than the oldest Greek texts which have been preserved to us. In the Noahchian table of Genesis (chap. x. 4) this race is mentioned as settled on the coasts of the Ægean, split up into different clans, and speaking different languages, under the name of "sons of Iavan." This curious genealogy is instructive as showing the notions held by the Hebrews *circa*. 1000 B.C., in regard to the geographical distribution, and the kinship of peoples with which they held either direct intercourse or knew only from hearsay. The Hebrews were aware of the large dealings which even then were carried on between Phœnicians and Greeks; of the nature and comprehensiveness of these dealings archæology has already informed us, but still clearer proofs will be put forward in the sequel of this history. When towards 870 B.C. Joel bursts forth into curses against the cities of Tyre and Sidon, one of the crimes laid at their door is their having led away Israelites to the land of infidels to sell them to the Iavanim. It requires no great science to recognize in these sons of Iavan, or Iavanim, the scarcely changed form of the name borne by one of the Hellenic tribes, the one which not only seems to have had a greater propensity for navigation, but was also the first to emerge from barbarism by contact with Eastern nations. The name of Iones or Ionians became more or less disfigured on the lips of Phœnicians and other nations; it sounded as Iavan with the Hebrews,

Iouna or Iaouna with the Persians, and Ouinin with the Egyptians. It was a collective name, under which were gathered all the sea-faring populations settled on the western shores of Asia Minor and the islands off its coasts, and which gradually spread to the West, when Greece and her populations became better known.¹

By a singular phenomenon this name, which thus early began to be applied by the Asiatics to the whole Hellenic race, is still used in the same sense by a people which, though stationed in Europe, still preserves certain Asiatic traditions. In their diplomatic transactions, the consecrated term employed by the Turks to designate the Government having its seat at Athens, is "Iounan Delveti," Ionian power. Deductions drawn from a correct reading of names, *e.g.* Iouanim instead of Toursha and Aquaïousha, and the conclusions arrived at from study of data gleaned in Greek writers, are in perfect agreement with each other. All the former had to tell in regard to the beginnings of the Hellenic race rested on no better authority than oral tradition; nevertheless, on the information they supply, modern historians did not hesitate to place in this same period the budding forth of the brilliant Ionian culture. This it is which forms the great interest attaching to information drawn from sources to which modern science had no access until a very recent date. If the Egyptian and the Semite alike stood too far off to get a clear vision of Hellas, and if consequently a precise or circumstantial account is not to be expected of them, anything they have to say, even by way of allusion, is nevertheless of the highest importance. Nearly all the facts recorded by the ancients had an air about them which did not invite confidence as to their trustworthiness, interwoven as they were with a tissue of fables which Greek fancy built up for centuries into a very complicated fabric, to please their vanity; yet it unexpectedly turns out that some of these supposed idle tales are confirmed by contemporary and disinterested witnesses. This coincidence strengthens the hand of higher criticism, which in the past more than once was sorely tempted to reject the whole evidence as unreliable; it warns it that these myths, the cause of so much faint-heartedness, contain a substratum of historical truth. Of course, considering the uncertainty of Egyptian and

¹ E. CURTIUS, *Greek History*.

Hebrew chronologies, we cannot look for rigorous dates in the tabular arrangement of the history found here; such as they are, however, they make us feel and touch the solid residuum which underlies the embellishments of Greek legend and poetry.

A main fact brought out by the agreement of traditions and the result of recent excavations is this: the coasts and islands of the Ægean had settlers long before their names appear in Egyptian annals. In these texts the first mention of the Aquaïousha occurs towards the beginning of the thirteenth century B.C.; but the Dardana, Iliouna, Masa, and Pedasa, and the Leka or Lycians, already figure about the middle of the fourteenth century B.C., in the list of auxiliaries whom the Hittite king of that period had summoned to him, to fight around Kadish those battles against Ramses II. the representations of which adorn the pylons of Luxor and Karnac. They are the Dardanians, Ilians, Mysians, and Pedasians of classic writers; the folks whose names and descendants still cling to that region of Asia Minor bordering on the Hellespont.

The Greeks too, calling to aid much ingenuity, elaborate calculations, and combinations, set up a chronology of their own. We shall not stop to discuss its method; the point which concerns us is that their valuations are found to coincide with the data derived from Oriental sources. Their oldest dates creep back to the middle of the thirteenth century B.C., that is to say, the actual epoch when, according to the Ramesside scribes, the barques of the Toursha and Aquaïousha scoured the Archipelago and threatened Egypt. The fact that these peoples could thus undertake distant expeditions and risk themselves on the open sea so far from their Cretan home, though keeping well in sight of land, not only implies a knowledge of navigation which had long overstepped its beginnings, but a long past during which they had learnt to build and man strong ships, fit to be launched on the main, and learnt also to trust the stars overhead to guide them at night. How long the apprenticeship was with either of the tribes it is impossible to say; but on the sites of the oldest cities, whether in Asia Minor, the islands, or continental Greece, where excavations have been prosecuted as far as the virgin soil or the living rock, under remains of structures and appliances for prompt and strong action, testifying to advanced industry, relics were found of a

much ruder age, traces of folk whose sole implements were of stone or bone, and whose ill-baked earthenware was not cast on the wheel.

That the coasts and islands of the Ægean were inhabited when Sidonian sailors were learning the way to those far-off lands, may be accepted as an established fact. If their purpose had been the purple-mollusk alone, they would have been content with securing fishing stations on those points where the murex was most plentiful. Nothing of the sort took place: if they everywhere planted factories along these coasts, many of which grew into important cities, it was because they were met on the threshold of their expeditions by a people whose mind was already sufficiently awakened to grasp the advantages likely to accrue to both parties from a free exchange of commodities.

Did this early population, which dwelt either in villages nestling in the clefts of the volcanic rocks of Thera, or the hill of Hissarlik, or at Tiryns, belong to a race other than the Greek? We have no reason so to think. The Greeks ruled, and their hypothesis is the likeliest, that they were descended from the Pelasgi, themselves the sons of the earth, the great nourisher of all. The Hellenes did not remember a time when, in order to get possession of the land, they were obliged to expel folk differentiated from them by language, public worship, and outward aspect. Nor has the spade of the excavator, however deeply it may have been thrust, brought out the slightest vestige indicating that a civilization earlier than that with which we are concerned, appeared on this scene. Despite considerable differences between what may be called the primary stratum and the next overlaying it, commonly called "Hellenic," there is nothing to betray a sudden gap, or that practical progress did not follow its usual course. The advance between the first and second epoch, the growth of taste and professional skill, may be tested by every one; but the persistency with which certain characteristic forms and processes recur throughout both strata induces the belief that the mass of the population was practically the same. Looking at them we seem to be present at the progressive evolution of tribes of the same stock, which through repeated efforts and successive flights of the imagination, rose from barbarism to a culture, at first of the most rudimentary kind, then step by step more complex and scientific.

At Thera, amidst the rubbish of dwellings older than the volcanic eruptions, are found vases whose shapes and ornamental forms will still be reproduced with pleasure by the art of an age within the historical cycle. Is not this a strong presumption in favour of the conjecture propounded by ancient tradition, and confirmed moreover by the finds of modern research?

Nor is this by any means the sum of what tradition and archæology alike permit us to divine of that dim past; they are not content with giving us a faint vision of the life which began to stir in the Archipelago in those early days, whose remoteness it would be vain to try and fix, even though in a vague and hypothetical fashion, or to affirm that in all likelihood the race which gave the impetus was the same which led the movement to its ultimate goal, and drew from it the most brilliant civilization the world has yet seen. By the light of this double torch we can mount further back still; we can confidently assert that this race was originally divided into numerous small nationalities, and that during a period whose duration is not specified, they incessantly whirled round a sea pre-eminently favourable by its configuration to perpetual displacements. Some among these peoples, the Leleges and Ilians for example, vanished, leaving no trace after them save a name. Others, such as the Phrygians, Carians, and Lydians, after a long sea-faring and adventurous life settled down peacefully in the west and south of Asia Minor, where they founded states of a certain importance. Finally, others whom fortuitous circumstances brought in close proximity to one another, were further gathered together by community of civil and religious institutions. They built up the Greek nation. The separation and the differences which served to mark them from their kinsmen, whose destiny was to be so different, did not take place until very late. Homer does not yet oppose the Greeks to the Barbarians. Reading the *Iliad* we might think that all the actors in the drama, no matter the side on which they fight or the country whence they come, speak the same language and worship the same gods. If this is so, it is not so much because the poet in his simplicity is as little concerned as our old *chansoniers de geste* with what is called local colouring, as that the world in which he lives is as yet destitute of those sharply-defined differences and strong contrasts which a twofold concentration of these tribes was later to produce,

bringing into existence, on the one hand, the Hellenic body, and on the other the Phrygian and Lydian kingdoms, as well as the townships of Caria and Lycia. At first all these tribes were mixed up together and had no fixed abode; they roved about and pressed forward in bands wherever they thought they could best live, settling down on spots made attractive by the fertility of the soil and the facility it afforded for barter. Gradually, however, and within the historical period, the several groups constituted themselves and got a firm foothold in the lands to which they attached their names. The migrating wave was first from east to west, from the Asiatic coasts to the shores of Europe. From their strongholds which guarded the entrance to the Hellespont, Dardanians and Ilians allowed themselves to be wafted by the breeze towards the southern sea, in quest of adventure and booty. They were in truth hardy mariners and pirates. This is attested by the rape of Helen, and still more by the names of Troy and Ilium, of Simois and Scamander, scattered along the coasts.¹ The Phrygians were supposed to have given kings to Argolis and carried thither their treasures. Cupola-tombs are found both around the Bay of Smyrna, in the old kingdom of Tantalus, and the eastern shores of Hellas. The chief buildings of the Leleges are to be seen on the Asiatic continent; tombs and fortified walls which meet us in Lycia and Caria, and bear upon them unmistakable signs of hoary antiquity, were attributed to them. So, too, they were held at Miletus as having been the earliest inhabitants of the country; Homer makes Priam fetch a Lelegian wife from the woody heights of Ida;² and their passage is to be traced also all over the shores of the Hellenic peninsula, notably along the coasts of Ælis, Messenia, and Laconia. The latter, it was affirmed, originally bore the name of Lelegia. At Megara, the hero Lelex headed the list of princes enumerated in the local history. As to the Carians, who may be called the doubles of the Leleges, they were spoken of as having been at Megara, whilst certain noble Athenian families claimed Carians among their ancestors. Again, they ruled that the Carians had once held undisputed sway over the Archipelago, during a period not otherwise specified,

¹ See KLAUSEN, *Æneas und die Penaten*, where all the sites bearing the names referred to are carefully marked out.

² *Iliad*, xxi. 85-88.

and at one time or another visited all its islands. Thucydides—thus showing the way to modern research—confirms this assertion, basing it on the results yielded by the excavations which his contemporary Nicias had made at Delos, in order to clear it of human remains buried there and to purify the sacred island.¹ The links which bound Lycians and Greeks together were no less close and intimate. Thus, we find in Crete the myth relating to Sarpedon, the king of Lycia and Minos' brother, and that of Bellerophontes and Perseus in Argolis; whilst Lycians support the dynasty of the Prætides, and send workmen to build their strongholds. These relations between the two groups come out even more clearly in their religious creeds: Apollo was adored with nearly the same rites at Delos and Patara, and Delian tradition credited Lycian priests with the honour of having largely framed the order of the ceremonial for the famous Ionian sanctuary.

Granting that the initiative and impetus came from Asia Minor, it is natural to seek in the same quarter those Greek tribes which first profited by such examples and suggestions as came within their range, and which, having shaken off somewhat of their rudeness, joined in the movement then setting towards the West, carrying with it all those light boats to the European shores. Were not the Iavanim the first-fruits of the nation that was to be, the Iavanim who, as far back as the ninth century B.C., appeared to the Semite, in the dim perspective view, as holding lordship over the isles and coasts of the West, they who throughout the first period of the existence of the Grecian people ever formed the vanguard of the common host, and who might be rightly called Hellas' spring? One is thus led by an imperceptible incline to E. Curtius' famous theory, which that eminent scholar published in a memorable essay more than forty years ago, and whose main lines at least have been accepted by the vast majority of experts.² The fact which Curtius has placed almost beyond cavil had been suspected by others before him,

¹ THUCYDIDES, i. 8.

² *Die Ionier vor der Ionischen Wanderung*, 1885. In a note of his *Greek History* will be found a list of the writings in which Curtius takes up again the question to defend or confirm his opinions, as well as those of scholars such as Casaubon, Niebuhr, and Buttmann, who before him had surmised what he tried to demonstrate, along with the names of such well-known savants as accepted and adhered to his theory with more or less reserve.

but he was the first to collect such an abundance of materials as enabled him to reason out his conclusions, and to meet vigorously the objections of his opponents. He showed how the whole of this history had been falsified on a most essential point by the susceptibilities and exigencies of Athenian vanity; that when through the action of Themistocles, Aristides, Cimon, and Pericles, Athens, towards the middle of the fifth century, became the most brilliant city of Hellas and the head of the Ionian league, her pride could ill brook that Ionians, whether of Asia Minor or the islands, whom she had well nigh reduced to the condition of subjects, should meet her lofty pretensions by flourishing in her face their just claims to be considered her elders, so that as such they could not be lightly set aside. In order to soothe a morbid jealousy, by a retrospective process which a brilliant present could not satisfy, they must needs seize upon the past, that heroic and legendary past towards which the gaze of all the Hellenic cities was fixed, each striving to find grounds that should administer to its pride, and furnish it as it were with patents of nobility. Athens must be raised to the rank of *metropolis*, as this was understood by the Greeks, looked up to by all the Ionians as the venerable centre whence had started, to settle in many places, the founders of all those famous cities; such as Ephesus, Miletus, Clazomenæ, Erythræ, Phocæa, and Chios, taking with them the sacred fire which was from henceforth to be kept burning in their Prytanea. The enforcement of this theory would thereby awaken and pledge the religious conscience of the Athenians to the maintenance of the empire, and give their city the right to exact the obedience which was due to her, as from dutiful daughters to their mother. When a nation is both more powerful and intelligent than all its rivals, when, to use a modern phrase, it rules by the sword and the pen, there is no great difficulty in assuring the success of or diffusing whatever opinions will serve its turn. Hence it came to pass that folk in the end accepted as an article of faith, that no Ionians had been in Asia before certain tribes of that family—which the Dorian invasion drove out of Peloponnesus and then obliged to take refuge in Attica—had set sail for the opposite coast, and that under the leadership of the Codridæ, descended from the old kings of Athens, they had colonized the regions that open into the valleys of the

Hermus, Cayster, and Mæander. It cannot be denied that about this time, pressed by a last descent of Highlanders from Pindus into Central Greece and Peloponnesus, a great "wandering of nations" took place; and that Greeks from all parts, amongst whom were some of Ionian blood, swarmed towards the coasts of Asia Minor. The latter, however, in all probability were but returning to their cradle-land, to join their brethren who had never stirred from their native homes. Athens was in no mood to remember these events; whilst the turn she gave to the exodus of the fugitives whom Attica had welcomed and sheltered for a time, soon caused them to be forgotten.

This is not the place to take up and discuss the texts and arguments to which Curtius appeals in support of his thesis; it will be enough if we cite the passage in his *Greek History*, wherein they are justified and summed up. Glancing back to remind the reader that the starting-point of the Dorians was known, and that their progress could be traced stage by stage, he concludes thus: "As to the Ionians, no tradition existed. Their spread and settlements accordingly belong to an earlier time. The localities in which they are first found are islands and tracts of coast; their migrations, as far as they are known, are maritime expeditions; their life that of a maritime people, at home on shipboard; and nothing but the sea unites together their widely-scattered settlements. But before they spread thus far they must assuredly have dwelt together in a common home, where in language and manners they developed all their peculiarities, and found the means for so vast an extension. But a connected great Ionic country is only to be found in Asia Minor."¹ Athens gave herself a literary language which, though bearing the impress of her own personality, betrays its Ionic origin. The farther we carry back the date when the Ionian group constituted itself, the better we shall understand the vastness of the domain over which it diffused its speech, colouring it with its own special hue. Finally, careless of contradicting themselves, the Athenians in their *Atthidi* or histories of Attica put forth certain statements which not even their ingenuity could reconcile with the system which their pride had so craftily trumped up. The authors of these writings had gathered together all the local traditions sedulously preserved, either by domestic worship or by that of

¹ E. CURTIUS, *Greek History*.

the village and the demos. According to their version, when the Pelasgi still tilled the Athenian plain, and Thracians and Mysians were invading the flat of Eleusis, the Ionians immigrated to the eastern coast or Paralia, the alluvial level of Marathon, where they planted four villages one close to the other, which they called the Ionian Tetrapolis. The situation occupied by these villages permits us to guess that the strangers had come by sea, either from Asia Minor or the Archipelago; had they been Ionians driven from Peloponnesus, they would scarcely have approached Attica on that side. On the other hand, there can be no question here of Ionians, who, one or two hundred years after they had left Attica under the leadership of the Codridæ or Nelidæ, would have returned to their former seats. When this last immigration took place, Attica had already reached that unity whose being was supposed to have been brought about by Theseus himself. The data relating to the Tetrapolis and the worship of Apollo which these immigrants carried with them and ere long diffused over the rest of the country, belong to a much older cycle of traditions, to a time when Athens had not yet come into existence, when the several districts which in the course of time became Attica lived each its own separate life and had its own special gods, when the bond of common institutions had as yet not gathered together these populations of different origin scattered in small groups on the slopes of Parnes, Pentelicus, and Hymettus, or the narrow valleys let in between them. Thought thus travels back to a very remote period indeed, when the Ionians loom in the distance as a sea-faring people, who, after having served their first apprenticeship in Asia, overran the Ægean, settled on several islands, and landed on more than one isolated point of the European continent, introducing everywhere the worship of the pre-eminently civilizing god, the god of light and progress.

Another group which must have constituted itself in the same region and followed pretty nearly on the same tracts, was that of the Achæans. Legend connected Ion and Achæus as brothers-german. In one of the genealogies which set forth the origin of the Greeks, they are called the offspring of Xuthus by Creusa, the daughter of Erechtheus. To Xuthus was attributed the planting of the Tetrapolis of Marathon.¹ Through the tribe of the Teucridæ,

¹ STRABO.

whose sons Ajax and Teucer are glorified in the *Iliad*, the Achæans are united with Lycia and the Troad. But what is of greater moment than these fables put together by the poets, wherein a considerable amount of arbitrariness has already crept in, is the well-attested fact that Cyprus, from time immemorial, had Achæan colonists, the remnants, we may suppose, of those Aquaïousha who, throughout the period of their great activity against Egypt, used the island as one of their head-quarters.¹ The still greater nearness of Crete to the Delta could not have failed to be taken advantage of by the invaders as an outpost and starting-point; hence we may safely regard as Achæan those "Eteocretes," or "real Cretans," as they pleased to style themselves, who receded to the plains and inland mountains at the approach of the Phœnicians, leaving them in full possession of the coasts, along which they sowed broadcast their factories. This conjecture is at one with the tradition which credited the Achæans with the foundation of several cities in the island, and recognized Minos, the venerable representative of Cretan culture, as a brother of Æacus, the progenitor of the Æacidæ, one of the most eminent Achæan families, of which we hear a great deal in the myths of Ægina, Salamis, Thessaly, and Attica.

Achæans, however, are heard of in places other than the far-off islands of the south. In Europe they appear in compact masses, particularly in the valley of Phthiotis, which parts Cæta from Othrys. Here is the chosen home of their favourite myths, of the songs of Peleus, wedded by a goddess and the friend and entertainer of the gods, and of Achylles, "the lovable Hero, who is an imperishable monument of the chivalrous heroism, of the idealism and poetic genius of the Achæans."² By and by, however, the Phthiotian Achæans, as they were called, found the rich district washed by the Sperchæus; but however rich it might be, it was much too small for them. Hence, crossing the Thermopylæ, they struck across Central Greece, and advanced as far as Argolis and Laconia. The story

¹ HERODOTUS and PAUSANIAS mention Arcadian colonies in Crete. The latter carries back this colonization to the Trojan war, that is to say, to the time when the Achæans were the dominant element in Greece. In that remote period also, the Achæan hero Teucer, of the Æacidæ family, was held to have founded Salamis; near the town a piece of coast bore the name of Achæa (STRABO).

² CURTIUS, *Greek History*.

went that this expedition had been started and carried through by Pelops, the son of Tantalus, a hero who had originally come from Sipylus and his Phrygian kingdom. But although the exact site and the manner in which the union had been effected were forgotten, between the foreign dynasty and the Achæan warriors, after the crossing of the isthmus the fusion was complete.¹ Ere long these immigrants made for themselves, in their new seats, a large and superior position. The grandsons of Pelops, Menelaus, and Agamemnon rule, one at Sparta, the other at Argos. In the old language Argos had the general signification of *strand*,² but in time it came to be applied in a special manner to the capital which the Achæans had built them on the Inachus. It went by the name of "Achæan Argos," in contradistinction to "Pelasgic Argos" in Thessaly. This denomination covered the plain of Inachus and the whole territory of Agamemnon, that is to say, the peninsula which has kept to this day the name of Pelops, the founder of the Achæan dynasty.³ If the Achæans left traces of their presence and doings in localities of the Grecian world found wide apart one from the other, nowhere, at least in the beginnings of the Hellenic people's existence, do they appear in compact masses, such as the Ionians in Asia, or as the Dorians somewhat later on certain points of Peloponnesus, or as the Æolians, whether in Ælis, Bœotia, or Thessaly. Accordingly we hear neither of an Achæan language nor of an Achæan art. In fact they do not appear, properly speaking, as a popular body, but rather as a kind of military aristocracy. Rendered famous by deeds of prowess against a distant empire, they had dispersed after this mighty effort, and from that moment they appear as warlike clans, presided over by families around whose names was cast the halo of antiquity. Princes of these families command expeditions organized for the purpose of conquest or simple adventure; and in their ranks the popular muse will seek the hero whom it will immortalize. This is why, in the majority of cases, the Achæan name in the epic serves to designate the whole army under the orders of Agamemnon; hence too the expression, "Sons of Achæans," to indicate noble descent.⁴

¹ STRABO, VIII.

² "Ἄργος πᾶν παραθαλάσσιον πέδιον" (HESYCHIUS).

³ CURTIUS, *Greek History*.

⁴ CURTIUS, *Greek History*; HOMER, *Iliad*.

The difficulty is greater when we try to define the characteristics of the Æolians or Æolidæ. They are younger than the Achæans and Ionians, or to speak more precisely, the clans so denominated do not make their appearance until long after the Aquaïousha and Iavanim were well known, not only in the Ægean, but far beyond its sphere; Æolian, unlike Achæan, is not one of the names which Homer indifferently applies, when the verse requires it, to the host assembled before Ilium. Nor do we find in the myths of Æolian heroes the slightest indications of ties which would connect them with Asia. The Asiatic shores may well have been—as in the Argonaut cycle—among the goals toward which heroes loved to steer their boats; but certainly never spots whence they took their departure. All this leads one to think that the appellation was applied to a number of tribes of continental Greece gathered together at a very late period, and not reckoned among Achæan families, whose speech was neither Ionian nor Dorian, and whose sole bond of kinship with each other consisted in their being all descended from the primitive stock of the Pelasgi. This theory is in accord with the etymology current among the Greeks as to the Æolian name: Αἰολεῖς, they said, signified the variegated, the many-coloured ones, *e. g.* mixed. The name of the Æolians was understood to signify the native Pelasgian tribes, whom the settlement of Asiatic Greeks and intermixture with them had advanced to a higher degree of civilization as husbandmen, navigators, and members of orderly political communities.¹ The greater portions of the populations which fall under this category inhabited coasts where the religion of Poseidon was held in honour, the god that raises and quells the storm. Among the Æolian heroes was ranged Jason, the commander of the ship “Argo.” That all these tribes should have spoken dialects which, despite numerous differences, have quite enough analogies in common to have been brought under the generic name of Æolic dialect cannot surprise us, since they are ruled to have all come from the same stock. In this dialect, according to philologists, are included those forms which, when compared with the cognate languages of Asia, must be recognized as the most ancient. The Æolic stands nearest to the original tongue of the Greeks, to that tongue which must be regarded as the common mother of the various dialects—among those of

¹ CURTIUS, *Greek History*.

the Græco-Italic language. Accordingly, it is that which most nearly resembles Latin.¹ Both ancient colouring and the undeniable analogies which are manifest between Æolic-Greek and Italian dialects become very plain if we accept the former as but a development of the Pelasgian tongue. Do not the Pelasgi represent the oldest stratum of Aryan population that came to Greece and Italy, and are not their traces found on either shore of the Hadriatic? Then, too, this notion fits in admirably with the affinities which grammarians point out between Æolic and Doric. Like the Pelasgians, the Dorians belong to that portion of the Greek race whose migration, by a land route, extended from north to south in the Hellenic peninsula. The Pelasgians, from whose ranks were to stand out the Æolians, advanced from the very beginning to the southernmost point of the peninsula, and overspread the plains and coasts, where their language lost somewhat of its roughness, whilst their manners softened by contact with the stranger.

On the contrary the Dorians remained centuries longer locked up among the high valleys of the central range, where they kept to habits engendered by the labours and privations of a penurious life; their speech is markedly rougher in its pronunciation, and in its full and broad sounds we recognize "the chest strengthened by mountain air and mountain life;"² Æolic, though softer, has no special character of its own; it may be said to stand mid-way between Doric and Ionic, but inclining to the former in that it retains aspirate sounds and full, broad vowels. Ionic acquires more liquidity and length of sound by means of vowels sounded one after the other, but with greater softness and less strength. The language, with its exuberance of forms and unrestrained phrase, suggests the same conjecture to the philologist which the historian has reached by another path. This idiom, when disclosed in its oldest monuments, bears unequivocal signs of having already lived longer than any other Greek dialects; it has become pliant and refined, so as to answer the needs of a society to which trade and navigation had brought a precocious culture, whilst the people on the opposite shores of the Archipelago had scarcely emerged from barbarism.

We know what influences were at work in bringing about a more rapid evolution among the tribes established on the

¹ CURTIUS, *Greek History*.

² *Ibid.*

west of Asia Minor, those which, like the Dardani, Phrygians, Carians, and Lycians, drew other nationalities to themselves, and those which, like the Achæans and Ionians, approached homogeneous groups scattered in Europe, and together ended in building up, if not a single commonwealth, at any rate a moral body, all that goes to the making of a nation. In the first place there is the radiation of the culture which we have called Hittite or Syro-Cappadocian. We have said elsewhere that it carried its arms and left the image of its gods northward of Taurus, as far as the mouth of rivers that descend from the central plateau of Anatolia and carry their waters into the Ægean sea. Even when obliged to fall back inland, cut off as the Hittites were from that sea by Aryan populations which had taken forcible possession of the coasts, they still influenced the new-comers in a variety of ways. This is proved by the borrowings which the Asiatic Greeks did not disdain to make from them.

Their oldest system of signs are the same which, through a curious phenomenon, survived very late in the Cypriote alphabet, and has all the air of having been derived from Hittite hieroglyphs through a process akin to that which the Phœnicians employed in the formation of their letters from Egyptian writing. Across Syria and Cappadocia lay the caravan routes by means of which some of the products of Mesopotamian industry, whose perfect technique was of long standing, reached the Ionians settled on the coast.

But if much came to them by land, far more was brought by sea. The Phœnicians were the initiators, the real teachers of the populations of the Archipelago.¹ They alone enlarged the narrow circle of the natives' daily life; they showed them vaster horizons, where the needs they had awakened in them could be satisfied. By calling to mind the mission which these early navigators assumed, and following on their track,

¹ Xenophon, on visiting a Phœnician ship anchored in one of the harbours belonging to Athens, was struck with the order which reigned on board; the measures that were taken to have at hand all the requisites for working the ship; and that on its floating house the crew should find all necessary accommodations, despite the large space allotted to the merchandise. From the admiration unconsciously dropped out, it would seem, we might almost infer that Phœnician ships were better kept than those of the Greeks. If this was the case, it arose from longer experience and older habits of a life spent on the sea.

we see the boats of the Phœnicians put out from Cyprus, their first stage in the western path, and creep along the whole extent of the south coast of Asia Minor, until at Rhodes they unlock the "gate of the Archipelago." Here they resume their journey, keeping close to the shore of the peninsula, steering northward, where in the deep inlets of the sea and mouths of the rivers, they found shelters more and more secure for their ships; where too innumerable capes and islets jutting out into the sea offered convenient stations to the sagacious mariners for their vessels or fisheries. In no other part of the coast could there be found natural harbours better fitted for a brisk coasting trade and exchange of mart, than the bays into which the Hermus and Mæander discharge their waters; here too is the meeting-place of the roads that lead towards Central Anatolia; and close at hand are great islands that run far out into the sea; whilst lofty headlands, such as those of Samos and Chios, rule the Cyclades. The first Sidonian boats that ever launched out to sea must have steered towards these regions, which were to become Ionia, and yet here are preserved fewer traces of Phœnician establishments than anywhere else. The reason of this apparent anomaly is easily explained. If the trail which the Semite left here behind him so soon vanished, it was because the Asiatic Greeks were the first to avail themselves of the stranger's teaching, and were thereby placed in a position to fight him with his own weapons long before any of their brethren. They showed the way to the other Hellenic tribes how to assert their independence, not only at home, in their own cities and the land surrounding them, but in the waters that washed their shores.

The Phœnicians held out longer in the islands.¹ Some were unproductive, of no great extent, and therefore uncoveted by their neighbours; they alone had thrift and patience enough slowly to discover and collect—as they did at Siphnos and Seriphos—the gold-nuggets buried in the rock. Others, such as the islands of the Thracian sea, were larger, and in places might be brought under cultivation; but they lay outside the sea-routes followed by trade between Europe and Asia. Here they long held more than their own, and apparently were left in undisturbed possession

¹ Thucydides was aware that the islands had been occupied by Phœnicians and Carians.

of the silver-mines of Thasos until the eighth century B.C. The names of the Cabiri or Great-ones, whose mysteries were celebrated at Samothrace to the last days of antiquity, testify to the share taken by Phœnician traders in introducing the religion of these deities.

It was in the nature of things that as soon as these bold mariners had made out the whole extent of the western coast of Asia Minor, and step by step ventured across the Sporades and Cyclades, they should not stop there, but should have been irresistibly drawn towards Europe and her islands, which they descried in the distance, when the sombre outlines of their mountains stood out from the purple sunset. Thitherward they sailed and reached their goal. They landed here and there and everywhere; at first solely in pursuit of the purple-fish; by and by, however, they were induced to return and make longer stays for the sake of the large profits which they derived from the sale of their potteries, arms, jewellery, and implements; for the trees that were felled for them in the forests for ship-building; for the dyes supplied by certain plants; for the furs and fruits of the earth, as well as war prisoners sold into bondage. Nevertheless there are localities which they favoured in a special manner, where their settlements acquired an importance unknown on other spots; where too contact between the two races evoked a decidedly greater progress, and exercised a more abiding influence both on religious creeds and local industries. With rare exceptions all these points are found in those Hellenic districts where the growth of culture was at once earlier and more intense. The stranger's example was the leaven which quickened the manifold energies and native faculties of the Greek race.

Towards Crete the Phœnicians swarmed in greater masses and at an earlier date than elsewhere. "How their settlements became fortified places is shown by the Phœnician names of important towns, such as Itanus and Karat, or Cæratus, afterwards Cnosus.¹ The whole island worshipped the Syrian goddess; as the queen of heaven riding on the bull of the sun, she became Europa, who had first pointed the way to this island from the Sidonian meadows. The Moloch-idol was heated to receive his sacrifice in his fiery arms."² They also obtained a firm foothold

¹ *Karth* signifies "town" in Phœnician.

² CURTIUS, *Greek History*.

on the two islands of Cranæ and Cythæra, from whose vantage-ground they could watch over the whole extent of the tepid waters, where their fisheries of the precious mollusk were most productive, even in the bays of Laconia and Messenia.¹ Here too Ashtoreth had temples raised to her, and when the Canaanite relinquished these posts, she continued to be worshipped under the name of Aphrodite. On this side the Phœnicians seem to have been content with island settlements. The coast of Laconia is steep and wholly unbroken; calculated to repel rather than invite colonists to settle there. Accordingly it can only have been inhabited when an excess of population induced folk to advance and utilize every foot of the stony ground up the rugged slopes of Parnon and the southern spur of Taygetus. Far more hospitable is the Argolian Gulf, with its long strips of land high above the waters, in which ships can ride at anchor; whilst in its rear stretches a fertile plain. Turned to the east, it seemed destined by nature to furnish the first points of contact between navigators and landfolk; "hence there is no spot in all the rest of Hellas with so varied a history as this before history began."² The cycle of Argian myths is of astonishing richness, and in each is prolonged the resonant echo of fragmentary tales which emigrants out of Egypt, Phœnicia, and Asia Minor had left in the memory of the native populations, together with the teaching they had given to the tribes grouped around those tranquil waters, and on those alluvial plains. Argos brings seeds of corn from Libya; then Io, after long wanderings, returns from the Nile valley. Danæus, the son of the Syrian Belus, enters the mouth of the Inachus on his "penticonter,"³ and thus reveals the art of navigation to the Greeks. Tyrian Agenor introduces horse-breeding into Argolis, and Prætus numbers Lycian Cyclops amongst his auxiliaries; Perseus is carried on the bosom of the waters in a wooden chest, and Palamides is the hero of the town of Nauplia, whose single harbour, fenced in by a long headland, takes in the whole of the Gulf of Argos. From the very outset,

¹ Consult PAUSANIAS in regard to the purple shells from the vicinity of Gythion. Cythæra was styled πορφύρεσσα. Here, according to De Saulcy, the shells of the *murex brandaris* are found in enormous quantities, whilst the only kind seen on the shore of Tyre is the *murex trunculus*.

² CURTIUS, *Greek History*.

³ A ship of burden carrying fifty oars.—TRANS.

the Phœnicians doubtless seized this safe anchorage and kept it as long as they could. Then, too, despite his Greek name and his figuring among Achæan dukes arrayed against Troy, Palamides, as the inventor of nautical art, of beacons set burning at the mouth of harbours, of weights and measures, of ciphering and letters, is the very embodiment of Phœnician culture. That all this is not mere invention and trick of the fancy, is deduced from the perfect agreement of these stories; they seem to point to the fact, that on this shore the strangers from over the sea began sooner and carried farther the education of the Hellenic tribes.

There is yet another district, the isthmus connecting Peloponnesus with Central Greece, where we also find indications of positions that once were in the hands of Phœnicians. Tradition places here, as guardian of the passes, that Sisyphus whom it credits with the perfidious craftiness which it imputed to the Semite trader.¹ Here Sisyphus establishes the worship of the sea-god Melicertes, who is no other than the Tyrian Melkarth; and in Corinth, which he founds, we recognize a Phœnician name.² Corinth was the home of Aphrodite; she remained the chief goddess of that town as long as the town itself endured. But as at Paphos and Cythæra, here also she ever preserved the stamp of her foreign origin, proved by the ceremonial performed by a crowd of eunuch-priests attached to the temple. Keen-sighted traders, such as the Phœnicians unquestionably were, could not but have taken in at a glance the enormous advantages of the low-lying isthmian ridge as a standard-point for navigation, parting as it does two seas. It may well be that they were the first to grasp how much would be gained—though at the cost of immense expenditure of time and labour—in connecting the Ionian with the Ægean sea, by a road, or “diolkos” as they said, which should convey merchandise and vessels over the isthmus, rather than expose them to the risks of a long voyage round Peloponnesus and its stormy headlands. On this spot, the meeting-place of all the routes which united Peloponnesus with Central Greece, they established a market for all time. When they had to yield up to others the privilege of being universal arbiters in commercial transactions, the industries which

¹ HOMER, *Odyssey*.

² The name of Corinth is but an Hellenized form of the Semitic word *karth*, “town.”

they had set up in connection with their factories did not disappear with them. Some few families of artisans elected to remain in a place in which they were known and sure of a market for their wares, rather than join in the exodus of their countrymen. As a Greek city, Corinth continued the fabrication of potteries, for which there was a great demand in many parts of the world ; she kept the secret of the purple dye ; and her rich fabrics, tapestries, and broideries were justly prized.

We are still on the track of the Phœnicians, if from Corinth we cross over to the Bay of Ægina. They gave the name of Salamis, which we have already met in Cyprus, to an island off the coast of Attica, which it preserves to this day. In it may be recognized the Semitic word *shalam*, "peace" ; passing to the Greeks, who have no equivalent for the English sound *sh*, it easily became *Salam*. Under this denomination were meant localities to which full liberty of traffic was guaranteed by formal agreements. On the mainland, in Attica, the sole instance of Oriental interference is found in the legend of Cecrops, who was supposed to have come from Egypt. The basin which later became Piræus was still surrounded by morasses of considerable extent, which parted it from the plain ; besides, the peninsular situation of Attica did not hold out the shortest routes by which foreign exports might be conveniently dispatched inland. Whereas purple fishers and traders alike, after crossing the Archipelago, were glad enough to find the Euripæan channel, into which they could run in their ships and make long stays. Eubœa was full of forests, and the murex was plentiful at the approaches of the headlands of the Magnesian peninsula ; along the Anthedon shores sponges could be had for the picking. Cereals of all kinds found an easy market in such countries as Thessaly and Bœotia ; which, thanks to qualities inherent to their soil, drew people very early to themselves, and caused the occupiers to become rich. The Spercheüs and Peneüs unlocked the fairest lands of Hellas. Towards the middle of the strait, near Hyria and Aulis, a narrow swelling of the ground, hardly to be dignified by the name of hill, rises like a screen in front of the low stretches of Bœotia ; the ridge is broken at stated intervals towards the top, thus allowing a passage for mules which long usage has turned into paths. It would appear that the Phœnicians, attracted by this fertile plain with its thick layer of

virgin soil, and the facilities of communication it offered towards the sea, departed from their habitual course and ventured upon a settlement some distance inland, of which Thebes was ever the head-centre. The consensus of antiquity was at one in attributing the foundation of Thebes and her first royal dynasty to Cadmus. His name helps us to discover his real origin : it contains the Semitic word *kedem*, "the one in front," *e.g.* the "East," that which is "passed," left behind, Cadmus, is the "ancient," or the "Oriental one." Be that as it may, myth in Central Greece, by one of those audacious syntheses with which it is familiar, ascribed to this hero the sum of the inventions which it was aware were due to Phœnician influence. He starts from the Asiatic side, where dwell his brothers Phoenix and Cilix, in search of Europa, the moon-goddess, and he finds her in the West ; he plants cities wherever he lands during his voyage, such as Rhodes, Thera, Thasos, and Samothrace. He becomes the head of royal and priestly families. But nowhere is the part he plays so important as in Bœotia, where he gets domiciled. The art of mining, of manipulating ore, and the employment of metal thus obtained for military armour, were inventions of Cadmus. He is the founder of artificial irrigation, a civil engineer and architect, and builder of citadels and walls ; he cuts roads across morasses which he drains, and tracts parted by streams he connects by means of bridges. Last but not least, Cadmus' name stood immeasurably high as the introducer of Phœnician letters into Hellas. The characters of the oldest Greek alphabet were ever called *Cadmic Letters* ; they stood in the same order and bore the same names which they had in Phœnicia ; and many of their forms kept very close to the Semitic prototype. By themselves, they testify to a borrowing which even Greek pride never dreamt of disputing.

But letters, names, shapes, and the situation they occupy in the alphabetical order, are by no means the only data by which may be tested the advantages which the ancestors of the Hellenes derived from their intercourse with the Semites. The story language has to tell in regard to the relations of the two races is no less plain. A curious and instructive list might be made of Greek words, which whilst they cannot be separated from the oldest body of the language, such as it appears in Homer and the Lyric poets, are not explainable by Aryan roots, inasmuch

as they betray Semitic words more or less disguised either by whim, popular transcription, or the endings proper to the idiom in which they are incorporated. With few exceptions, the words that fall under this category are names of raw materials, of animals, of plants and fruits not found in Greece; more often still of implements and manufactured objects, such as *sindon*, cloth, *calamos*, cut reed which served as a pen.¹ To a certain extent, with the help of this repertory, a catalogue might be made of the borrowings, call them rather gifts, with which the strangers enriched the inhabitants of Hellas. The list, however, would not be complete, for many productions of Oriental industry must have entered Greece and have been circulated inland under names other than those which they bore in the country of their birth. In all those instances where the original name was preserved, the fact of the borrowing betrays itself under its Greek garb; upon the merchandise was glued on, as it were, a trade-mark which warranted its origin.

If, through no love of the Canaanite, the Hellenes attributed to him the largest portion of the transmission of the civilizing elements, they were aware of their indebtedness to Libya and Egypt for the rest. As was said above, Io visits the banks of the Nile, and from it Danaüs migrates to Argolis. The first king of Athens, Cecrops, was an Egyptian fugitive; so too from Egypt came the great gods of Hellas, and Dodona received thence the priestesses of Zeus. An important distinction should be made here. When the Greeks, during the Twenty-sixth Dynasty, entered Egypt, the impression made upon them by sudden contact with the stupendous monuments of that well-ordered society, was one of wonder and amazement. Under the fascination created by the instances of Egyptian art, Greek travellers, Ionians and then Athenians, rained questions on every likely individual, as to the origin and age of the monuments they beheld, the signification of images decorating them, humbly and eagerly listening to the answers which the priests or rather the sacristans gave them, who, then as now, showed visitors over temples and public buildings; reverently they collected the

¹ A list of a certain number of words under consideration will be found in RENAN, *Histoire des langues sémitiques*. The author, however, warns us that the list is anything but complete; his object was to convey some slight idea of the borrowings in question, and the sets of names which obtained the preference.

stories which they heard from Carian dragomans, quite as prone to draw the long-bow three thousand years ago at Thebes and Memphis, as ciceroni are now-a-days at Naples or any other show-place. They scarcely fared better at the hands of priests of superior rank to whom they happened to be introduced, for these, whilst they supplied information, some of which was of unquestionable value, wished above all to impress the visitors with the superiority of everything Egyptian. In this fashion they revenged themselves upon the strangers for the favour these enjoyed at the court of the Pharaohs, for whether as mercenaries or privileged merchants, they were beginning to hold important situations in the state. The priests went out of their way in their endeavour to persuade the Greeks that they were but as men of yesterday by the side of the Egyptians, whose culture mounted back thousands of years; the better to convince them of this, they set forth with much show of argument, that those arts and gods which Greece proudly claimed as her own had all come from Egypt, and been taken to Hellas by fugitive priests and princes from the Delta. These in their new home had become the initiators and apostles of Greek civilization. In support of this line of argument, they trumped up, doubtless with the connivance of the Greeks, by no means loth to help in the fraud, stories bearing, though only superficially, a certain air of resemblance, a seeming affinity of sounds and names, a concordance of rites and usages to one another. Strange as it may appear, no Greek, even the wisest among them, but became a dupe to these inventions. Hecataeus and Herodotus accepted and diffused them among their countrymen. Plato propounded them in the following century, and their echo is borne down to us as late as Diodorus. Like upstarts whose aim in life is to find ancestors out of a family of undoubted nobility, the Greeks were flattered to be connected with a nation which they were fain to regard with involuntary reverence.

The historians of Greece and her wise men as well, from the first day of their acquaintance with the Nile valley, succumbed to a kind of Egyptomania. It was whilst this mood was uppermost that they invented the Cecrops myth; one among many other instances found in Herodotus of those artificial affinities which they sought to establish between Athens and Egypt, between the gods and ceremonial of Hellas and the Delta. It was a

late and skilfully-devised invention. This by no means applies to Io and Danaüs; both one and the other undoubtedly belong to the old cycle of Argian myths. On the other hand, we know that bred-and-born Egyptians were stay-at-home folk, indifferent to the world outside their own; that in the whole mass of documents of every kind left by them, there is not a single text from which it could be inferred that before the advent of the Saït dynasty they had direct dealings with Southern Europe; hence the conclusion that some slight error and confusion crept in and somewhat altered the form which these legendary tales assumed. In the course of her political existence Egypt was attacked again and again by poor warlike tribes from Asia Minor and Syria, from Cyprus and Crete, and even from her nearest neighbour Libya; one and all invaded Egypt for the sake of plunder. Some of these tribes, the Shardana and Masaouash, appear to have succeeded after a long struggle in obtaining, as auxiliaries, a foothold in a land well calculated to excite their covetousness. We may easily imagine that in such circumstances, a change of ruler, or of government, a military sedition crushed with main force, was likely to compel one or other of these bands to take to the sea in quest of new seats. These soldiers of fortune and their families had been domiciled in the country for several generations. They spoke its language, its manners and dress had become their own, and they practised some of its special handicrafts; coming from Egypt, they may well have been mistaken for Egyptians. Under this reserve, it is not improbable that there may be a residuum of truth in the belief according to which Egypt, once upon a time, would appear to have sent forth her contingent of colonists to Hellas. With due allowance for this notion, it remains true that the bulk of practical knowledge, of ornamental designs, and of wrought objects, which reached Greece throughout the whole extent of the archaic period, were carried thither by the Phœnicians, the acknowledged brokers of Egyptian industry and agriculture, and that Egyptian inventions and Egyptian examples had a share in the development of Greek genius.

It is plain therefore that the part of teacher, which the Canaanite was called upon to play for centuries on the coasts of Hellas, was a comprehensive one. Even on such points where they had no fixed domicile, as was the case on some of the islands and

fortified posts, their boats would reappear with each returning spring, just as to-day Neapolitan fishermen may be looked for almost to a day on the Algerian coast. As soon as they were sighted on the horizon, the mountaineers from every nook and corner would make for the shore, carrying last year's produce, which they hoped to exchange for vases, arms, and implements of every sort. This yearly market-fair went on for days on many a spot along the whole line of coast. Considerations however other than these must be taken into account, in order to grasp how these populations passed from barbarism to polite existence. Although details escape us, we know in a general way, by the effect they exercised on these nations, that violent conflicts and struggles went on for generations, between the natives and warlike bands which repeatedly landed on various points of the Hellenic coasts.

In the centuries that went on before the Homeric epoch, Oriental culture too had its Cortezes and Pizarros, men of determined and resolute minds, who, conscious of their superior appliances and armament, took forcible possession of lands which they found to their convenience. Heedless of the small numbers they had with them, their first thought was to build on some height, with huge, unsquared blocks, a stronghold whence they ruled the country far and wide, striking terror into the natives, mingled with somewhat of admiration, but wherein the element of fear was sufficiently strong to make them accept almost without demur, mayhap even bringing some sort of simple, joyous alacrity in the obedience which they vowed to these strangers, who appeared, to their inexperienced eyes, gorgeously arrayed, and who furthermore impressed their imaginations with the pomp and circumstance they displayed in their religious festivals. That Egypt may have sent to Hellas exiled chiefs who, when opportunity served, easily turned into conquerors, is not in itself improbable ; but these as a rule hailed from Asia Minor, or that part of it which we have called Eastern Hellas. Such would be Amphiön and Zethus, in their twofold character of initiators of the arts in Phrygia and the successors of Cadmus at Thebes ; so too the Prætidæ and Perseidæ, the founders of the Argian dynasties, whose relations with Lycia are implied in all the stories told of them. Such above all would be the Tantalidæ, who come much nearer to the historical cycle. The Phrygian

origin of Pelops is not open to doubt. Underlying much that is strange and fantastical in the tales relating to this family, one guesses a prince driven from the region of Sipylus by the collapse of a kingdom which had long been prosperous, but whose wealth had excited the cupidity of its neighbours, and finally succumbed under their repeated attacks. In his flight, Pelops takes with him part of the wealth which his ancestors had heaped in their mountain fastnesses; partly owing to these, partly to his gallant companions, on landing on Grecian soil he is hailed as a predestined hero who will lead all his followers to victory. With his forces, the Achæans invade Peloponnesus and take Mycenæ, despite its stout ramparts. Under its new lords, the town is further enlarged and strengthened. The precious metals which Pelops found accumulated here or had brought with him, or those that were added by his successors, constituted a mass of fabulous wealth in the eyes of the natives. Long after these events, Mycenæ was still exalted in the strains of the poets as "the golden city"; on no other spot of Greece have excavations yielded so great a quantity of gold as that which the late Dr. Schliemann brought out of its acropolis.

When we sought to note the direction of such currents as carried to the shores of Hellas Oriental notions and industries, defining at the same time these influences and their mode of action, it was in truth equivalent to sketching the history of primitive Greece, so far as so vast an enterprise is possible. What we know best of prehistoric Greece, are her borrowings from Asiatics who were already civilized when Hellas was still in the trammels of barbarism, who wrote on wood, stone, metal, and clay, when she did not even suspect that such means existed for preserving the memory of the past. What eludes our grasp are the repeated efforts made by these tribes to turn to the best advantage the new materials, whether of a spiritual or practical nature, which their large dealings with Orientals brought to them, along with the waking up of their slumbering impulses, and the several stages through which they passed between primitive rudeness and the point when, although as yet unequal to their teachers, the desire to imitate them began to stir them to action. Unfortunately, the myths dealing with the infancy of Hellas contain no data to lighten the mystery during which this slow and obscure travail went on; nor will the Homeric poem be

more helpful, for when it came into being the worst or rudest stage had been left behind. If at this period industry and art exhibit as yet no great advance, the intelligence of the Hellenes is awakened and living enough to enable us to foresee that ultimate progress is a mere question of time. This progress was not alike everywhere; though apparent even where Phœnician vessels made but transient apparitions,—much after the fashion of sea-birds alighting awhile on their journey, but soon again on the wing,—it was particularly rapid and all-embracing on spots where the Canaanite, as at Nauplia, Corinth, Salamis, and many other tracts of the coast, kept open shops the whole year round; where too artisans set up their workshops alongside of them. Notwithstanding the precautions which doubtless were taken to keep secret their trade-processes, it was impossible that some of them should not have oozed out during the fabrication of a number of objects on the spot. Besides, how is it possible to conceal from peering eyes peculiar movements of the fingers, of the shuttle, of the needle-point, and of the chisel at work, as must frequently have been the case in those temporary bazaars, open booths, and shanties? All these coast-markets were but makeshifts, opened at a moment's notice, and hastily abandoned if information came to their owners that larger gains could be made on some other spot, or if haply they were threatened by turbulent neighbours. Nothing of the kind was to be apprehended in those localities where freebooters had settled with the intention of remaining. In some respects, these leaders call up to mind the famous Spanish adventurers who conquered Mexico and Peru for their country. It made no difference whether they had taken forcible possession of the soil or had been welcomed with timid and respectful deference by the natives; it was clearly to their advantage to make their new subjects loyal and useful servants of the state, teaching them the arts of war and peace. Their following was small; to fill up the gaps they could scarcely depend on recruits from home; for the mother-country had much ado to remember all her children scattered to the four points of the compass. Moreover they had almost always come without women, and had intermarried with the daughters of the land; through these marriages, races and interests were more intimately united, whilst the most energetic elements of the native population were amalgamated with the peculiar qualities of the strangers. Accordingly

they had a fair share of the good things of this world ; like the Homeric "shepherds of the people," they lived in strongholds as feudal lords, whilst the land around was cultivated for them by humble folk domesticated in villages, whether labourers or artisans. Such probably was the state of affairs on many a point where we hear of settlements planted by Eastern nations gathered together from every quarter of the globe, Egyptians and Syrians, Carians, Leleges, and Phrygians ; for the most part, however, the legend has left out altogether the circumstances that led to the invasion. We are somewhat better off with regard to Thebes and Argolis. The Cadmeones or descendants of Cadmus were conceived of as a princely race, resplendent in purple and gold, and in glittering brazen armour. Served by their warlike mien and the practical knowledge of their companions, they transformed the land and founded a city which stands to this day. The like fortune attended the Pelopidæ. The tales with which they are concerned impress one with the enormous wealth and power that came to Peloponnesus with a Phrygian dynasty, whose head-centre was Mycenæ. The prosperity and influence of the Asiatic invaders, who had brought with them a superior culture, was shared by the Achæan clans.

All this implies a perpetual movement to and fro between the opposite shores of the Ægean ; every shock occurring on the Asiatic coast has its rebound on the European side ; the current never changes its course, which is from east to west. From that time forward the Archipelago was covered with countless vessels ; and everywhere trusty and experienced pilots were found, who had made a careful survey of the rocks, sounds, and havens of these seas, which they had traversed many times. What this flourishing navigation still lacked was security : piracy was rife, and every mariner easily changed into a freebooter, if he found in his way an unguarded village, crops to be plundered, and above all women and children, whom he would either persuade to follow him or kidnap when peaceful means failed. Rapes were of such frequent occurrence, that whilst fearing them, the country folk sat down without too much protest to a state of affairs which they were powerless to prevent. Thus, in the time of Homer, whenever strangers landed on the shore, the question was put to them whether they were traders, or sailing about as pirates ; so general and deep-seated were these habits

in waters full of islands and protecting inlets.¹ Piracy, that brigandage of the high seas, lived on more or less unchecked in the Archipelago until the power of steam enabled royal cruisers to give successful chase to suspected vessels. In this matter the Cretan dynasty set the example, and assumed the office of maritime police; but everything connected with the first imperial power is put on Minos' head, whose venerable figure fills the threshold of Greek history. A cursory glance at the map will make it plain why Cretan rulers were led to take that great step. The island lies athwart the southern entrance of the Archipelago, like a lofty citadel of the sea, ruling it in every direction. Its northern coast abounds with harbours; some are turned towards Cythæra and the southernmost points of Peloponnesus, whilst, in the centre, others face the main group of the Cyclades, and others again, to the eastward, open on the Sporades. They seem to be purposely dropped there as outposts; to the end that on whatever side the enemy should appear, one will always be at hand to cope with him. All the native tribes acknowledged Minos' authority; his cruisers, as we should say, kept an eye on vessels that navigated these waters; preventing or punishing depredations, as the case might be, thereby benefiting commerce, which under his fostering care was able to widen its sphere of activity and prosper exceedingly. This seems to have been the first attempt of the Hellenes to establish the dominion of right and law, law which is the work of reflection and reason, whilst right or order is brought about by merging private interests in public ones.

Of Minos the story went that he had expelled the Carians out of the Archipelago, and that his ships were manned by Carians. The contradiction is more apparent than real. Under the pressure of the Cretan princes, the marauders, whether Carians, Leleges, or Phœnicians, who infested the island sea, were compelled to clear out or settle down to quiet and regular habits. Some were domiciled on the islands and built them villages; others became sea-merchants, and not a few entered Minos' fleet.

The first Hellenic king, therefore, whose name lived on in men's memory, was a sea-king, and his *Thalassocracy*, or maritime empire, which we descry through the nebulous veil of the myths, is the rudimentary outline, as it were, of that which Athens was

¹ HOMER, *Odyssey*.

to build up in the fifth century B.C. The people which Minos covered with his protection paid him a tribute; and members of the royal family were sent as military governors to the most important islands. There is evidence that certain districts on the mainland paid homage to the kings of Crete; and legend, after its own fashion, asserts that at that time Athens was a dependency of Crete. So too the Homeric hymn to Apollo testifies to the influence which Crete exercised on Delphi and Central Greece; whilst from the name of Minoa, borne by a Sicilian city, we may hazard the guess that Cretan sailors were not content to open new paths beyond Cape Malea and circumnavigate Peloponnesus, but that they boldly pursued their voyages in the wider waters of the west, and crossed the Hadriatic; thus forestalling the great colonizing movement of the ninth and eighth centuries B.C. Crete was pre-eminently qualified by her natural resources to assure commercial prosperity, by placing it on a solid basis. It has many climates, and the variety of its productions suffices for its own wants; it possesses mountains of amazing height, whose snowy summits or "Monts Blancs" are visible as far as Caria,—secluded fertile valleys let in between the rocky crags of this mighty range, a vigorous and dense population, steeled by hard labour in the culture of steepy mountain sides, and the pursuit of large game in the vast forests of the interior. Again, its princes found, in the rich plain towards the sea, tracts teeming with traders and fishermen, as many recruits as they needed for carrying out their ambitious designs. Town life had here its beginning sooner than anywhere else. Homer, in speaking of Crete, uses the epithet *ἑκατόμπολις*, "hundred cities"; its towns were so many that their number was unknown; hence tradition placed here the cradle of the arts and religion. The Cretan sculptor whom they called Dædalus personified the first efforts and successes in the domain of plastic art. Though excavations have only been attempted on very few points, as far as they go they confirm the witness of antiquity. The most interesting by far were made in the cave of Zeus, close to the site of Cnosus. Here were found both monuments of Oriental origin, brought to the island by trade, and objects which the earliest native smelters and chisellers wrought in imitation of these models. We may look forward to fresh discoveries being made in the

near future, to complete our knowledge as to the important part Crete played in the Grecian world throughout the period with which we are dealing.

There is yet another people, closely connected with the Æolians, which in consequence of its proclivity for navigation and life-bringing contact with nations beyond the sea, appears to have reached, about this same epoch, a considerable measure of culture: we allude to the Minyi. Their original home is unknown; their seats are on the brink of the Pagasæan Gulf, at the foot of forest-clad mountains, like Pelion, where an abundance of timber is found for constructing barques, which they first launch on the tranquil waters of this great salt lake, then learn to steer them along the neighbouring coasts, and ere long row out into the very heart of the Archipelago. "The Minyi are the first who impelled a movement of the Pelasgian tribes beyond the sea, and thus opened Greek history in Europe."¹ Their abodes are the home of the popular songs, the themes of which are the distant voyages of the *Argo*, and the earliest effusions of the Greek fancy which have reached us.² A sea voyage, owing to the elasticity of the scene whereon it is enacted, lends itself more readily to day-dreams which are apt to visit the mariner as he sits in his boat gently wafted by the breeze, in a mood between sleep and wakefulness, whilst before and around him is the infinite expanse of oceans as yet unsounded, the mystery of the unknown, and strange lands which lie hidden below the horizon line. There are divergences between the different versions interwoven with the legend in question, between the names and countries of the heroes associated with the venture, the ports from which the marvellous ship weighed anchor, and the spot which the fabulous island of *Æa*, the goal of the expedition, is supposed to occupy in the heavens; but in all the variants, Jason, King of Iolcos, commands her. The Minyi spread beyond their borders both by sea and land; for they soon found the narrow strip of hilly ground which encircles the bay insufficient for them. Their vanguards penetrated to the southern extremity of Peloponnesus, and occupied the valleys of Taygetus; the main body of the emigrants, however, remained in the fertile fields of Bœotia. There, a long mountain ridge juts out from

¹ CURTIUS, *Greek History*.

² Ἀργὼ πᾶσι μέλουσα.

the eastern side of the mass of Parnassus, fencing Lake Copais to the westward. At the lower edge of the height, the Minyi built a city which they called Orchomenos, and an acropolis above it; it had a long and prosperous existence of its own, until it succumbed to the jealousy of Thebes. A building which the ancients called the "Treasury of Minyas" rises hard by the village of Skripu, and serves to mark the site of the old city; its place is among the earliest and most curious monuments of Hellenic architecture. To the patient industry of the Minyi was also ascribed the honour of the execution of embankments of exceeding grandeur, which were to enclose the influx of the Copæic waters, ever threatening to invade the plain. By carrying them to cavernous passages found eastward, they assured their outflow and the purification of these subterraneous conduits.

If nothing remains of the walls and structures of Cadmic Thebes, it is because the earliest constructions were used as materials for building others over them. But the epic poems dealing with the two sieges sustained by seven-gated Thebes, attest its power and the admiration aroused by its strong bulwarks. Here too the inhabitants showed no less skill than the Minyi of Bœotia, in draining the lands of their surplus water, whether from mountain streams, such as the Ismenus and Asopos, or inland lakes. The early inhabitants of Attica have left but scanty traces of their activity; in Argolis, however, a very fair notion may be gained of the kind of culture to which certain tracts of Greece had attained before the Doric invasion. The links which connected its several dynasties, the Prætidæ, Perseidæ, and Tantilidæ, were all of a more or less intimate nature. At that time Argolis already counted many towns; some, like Nauplia, Asinæ, and Hermione, were built on the sea, and had probably grown out of Phœnician factories; but others, Tiryns, Argos, Mycenæ, lay inland, and ruled both the plains and the gorges leading to them. The sites were well chosen, and the eye which had taken in every point testified to no mean art. Both in the skill with which the natural features of the ground were utilized, and the indestructible solidity and brave look imparted to ramparts standing to this day, in despite of repeated onslaughts made upon them, as well as in the severe nobility of the tomb and wealth of its furniture, the explorer who makes the plan of these imposing ruins, or sounds the depths of a soil

so rich in surprises, becomes aware at every turn of the effects of the steady work of a society which is no longer in a rude period, but has attained to a stage when men have grown strongly attached to the land which they deem their own for all time, and in which are buried their dead. This society has already behind it a long past ; for it possesses a style which ages alone can give. No matter its starting-point or the models whence, in the beginning, it derived its inspirations, it ended in being truly original, in that it impressed upon all its works something of its own individuality. To have been capable of building monuments such as we behold here, and have put the stamp of a special and well-defined taste on plastic arts of every kind, these lands must have had a dense population, well disciplined and very active, presided over by opulent and ambitious princes, who readily found any artificers they required for the execution of these stupendous works of public utility.

The brilliant and animated life of these commonwealths was abruptly cut short by events, the character and sequence of which are no riddle for the historian, as soon as he turns away his gaze from the waters and coasts of the *Ægean*, and fixes it on the mountain tribes that entered the Hellenic peninsula by the sea ; moreover, by the light of modern Greek history, he is able to understand much that went on in by-gone days on this same stage. He remembers the Albanian invasions of the last century, and the effects which they produced in Central Greece and Peloponnesus ; they explain to him what the Thessalian and Dorian invasions were some three thousand years ago, in what measure they modified the condition of both inhabitants and land, bringing with them new dialects which they imposed upon the population, and sending out in many directions migratory groups, which sought to find beyond their boundaries what their country no longer secured to them : full possession of their hereditary plots, and freedom to live under laws of their own framing.

It is more particularly towards the fields surrounding the fine sheet of water at Janina, that we shall find the oldest traditions of the Hellenic race, which hitherto have lain as it were out of sight in the deep glens of woody Pindus. There, at a short distance from the lake, in the secluded, low-lying valley of Tomarus, was discovered Dodona ; Dodona long sought in vain, and held in antiquity as the first religious centre around which

the Pelasgians established themselves, along the banks of the Achelous and Thyamis, between Pindus and the Hadriatic. It is in this region, where the Pelasgic element commenced its civilized career by settling on the land which it cultivated, that the dual names (Γραικοί and Ἑλληνες) by which this nation is known to history came into being. The art of this people forms the subject of this study, and its name will often recur in these pages. We are tempted to believe that the name of Græcs, Greeks (Γραιῖοι, Γραῖοι, Γραικοί), assumed the value of a collective name before that of Hellenes, inasmuch as the Italians applied it to those tribes which separated from them, when, going round the head of the Hadriatic, they passed down towards Italy, whilst the others remained on the eastern coast of that sea, and fixed here their abode for all time. The fact that this ethnic appellation persisted in Italy, even when for ages past the people—whose art and literature the Latins strove to assimilate—had called themselves Hellenes, proves that the habit dated from a very early date. Modern languages, without exception, those of northern as well as southern nations, have adopted the Roman fashion. Apart from scholars, not many people use the names of Hellenes, Hellas, although strictly speaking such terms should have been incorporated into our idioms.

The nation which made the name of Hellenes famous in the world's annals, whose reflected glory their descendants are proud to share, never wholly forgot this primal denomination. It was kept alive by native antiquarians, conscious as they were of its right of primogeniture over all others; they were conscious of its having been applied at the outset to those tribes dwelling in the vicinity of Dodona. Aristotle with his usual precision tells us—"Ancient Hellas lies around Dodona and the Achelous, which has several times changed its course; here dwelt the Selli and the people that were formerly called Græci, but are now termed Hellenes."¹

Side by side with the name which has fallen into desuetude, the text places that which ended in being universally adopted, presenting it in its oldest form; Selloi, of which Elloi is but a variant, is met elsewhere, as also in its more developed or

¹ Ἑλλάς ἀρχαῖα περὶ Δωδώνην καὶ τὸν Ἀχελῶν ὧκον γὰρ οἱ Σελλοὶ ἐνταῦθα καὶ οἱ καλούμενοι τότε μὲν Γραικοί, νῦν δ' Ἑλληνες (ARISTOTLE).

later form of Hellenes.¹ The first literary mention of these Selli or Helli is found in the *Iliad*. Achilles prays to the god of Dodona, and reminds him that the interpreters of his will, the Selli, dwelling around his sanctuary, never wash their feet, and sleep on the bare ground.² Even in after ages, when manners had softened, they persistently adhered to the coarse and uncouth habits of the founders of this local worship; it was their way of reminding the faithful of and impressing upon them the hoary antiquity of the shrine. After them the surrounding country was called Hellopia or Hellas.³ Then, with tribes that crossed Pindus carrying with them the rites of their national religion into the eastern districts, along with the fame of its infallible oracle, the name extended to Southern Thessaly. In the *Iliad*, Hellas appears almost as synonymous with Phthiotis; and Achilles so calls the land inhabited by his Myrmidons.⁴ In the enumeration of the chiefs before Troy, the inhabitants of that country are once called Hellenes.⁵ From the *Iliad* to the *Odyssey*, the appellation becomes more comprehensive still. Speaking of Ulysses, the formula which oftener occurs to the poet is the following: The hero whose glory has spread afar into Hellas and the centre of Argos as well.⁶ Hellas, writes the Scoliaist, lies in Thessaly. And so it does; but it is probable that the thoughts of those who heard the songs in which the two names are thus brought together did not travel to Thessaly and Argolis alone, but that on the one hand the formula called

¹ Aristarchus, in a note upon the Homeric line cited below, adds his testimony to the co-existence of the twin forms 'Ελλοί and Σελλοί.

² *Iliad*, xvi.—

. . . ἀμφὶ δὲ Σελλοί

Σοὶ ναίουσ' ὑποφῆται, ἀνιπτόποδες, χαμαιεῦναι.

³ On Hellapia, or the canton having Dodona as head-centre, see HESIOD's description (Fragment LI. ed. Lehrs).

⁴ *Iliad*, ii.

⁵ *Iliad*: Μυρμιδόνες δὲ καλεῦντο καὶ Ἕλληνες καὶ Ἀχαιοί. In that section of the poem, the word Πανέλληνες is found. Of Ajax, son of Oilæus, it is said that he excelled Πανέλληνες καὶ Ἀχαιοὺς, in his skill in whirling the spear. Aristarchus, however, remarked long ago that for Homer the Hellenes were only a Thessalian population, and that the line in question bore the impress of a later time and usage. With the Alexandrian critic, we must fain consider this verse as one among the interpolations which abound in the poem, notably in the ships' list, where facility for insertion was too strong to be resisted.

⁶ *Odyssey*: ἀνδρὸς, τοῦ κλέος ἐὺρὺ καθ' Ἑλλάδα καὶ μέσον Ἄργος.

to mind the whole of the northern lands in which the Selli of Dodona and the Phthiotian Hellenes held so large a place, and on the other Peloponnesus, often called "Archaic Argolis." Henceforth Hellas meant Greece beyond the Isthmus, or the half of European Greece. Towards the end of the ninth or the opening years of the eighth century B.C., Hesiod uses the designation in the sense which it will have with all classic writers.¹ He too, long before the Lyric poets, employs again and again the expression "Panhellenes," with exactly the same meaning as the Athenian orators of that and the present day.² If the name became general, it was because it supplied a want. Step by step, through commercial progress and softening of manners, more intimate relations were established between the clans of the same race scattered round the Archipelago; they found out that with a little trouble they could understand one another's speech, whereas beyond their own borders they met nations whose language was unintelligible to them. They were further persuaded that although local cults were undeniably possessed of features which were not shared by their neighbours, in the main they had the same gods, and many of their creeds were common to all. The closer they looked into one another, the more they were convinced that resemblances far outweighed differences; the latter after all were of little account. If unfortunately they quarrelled rather too often, as sisters they could always make it up again. As soon as they became conscious of their primordial unity, they cast about for a generic name which should separate them from people whom they called "Barbarians," stammerers, the folk whose language they did not understand. This name the Ionians seemed pre-eminently qualified to furnish; and at first sight they look as if they had a much better right thereto than the uncouth mountaineers of Hellopia. If matters turned out differently, it was because the need of a common name was first felt on continental Greece, where the several groups which collectively built up the Greek nation were thickly pressed together, and consequently had to live in closer proximity the one to the other. In Europe, the main, the decisive action

¹ HESIOD, *Works and Days*. Thucydides, whilst endeavouring to account for the reasons why the name should not only have been diffused but have prevailed, admits that considerable time was required to bring it about.

² HESIOD, *Works and Days*.

was accomplished by northern tribes, which in some sort had lagged behind the Eastern Greeks, before whom lay open the sources of Asiatic culture. We see this very plainly if we examine the successive migrations, invasions, and encounters which in the end built up—towards the eleventh century B.C.—a Greece set upon a solid basis, historical Greece.

The movement came from Epirus, but was continued beyond its boundaries. Those of its inhabitants who never left it, the Chaones, Thesprotians, and Molossi, are of little or no account in history, where they made but a tardy and brief apparition with Pyrrhus. Epirus gave the impetus by sending over Pindus the surplus of its population. The easiest way of access is through the pass of Gomphi, which is open nearly the whole year round. Through it passed the Hellenes, who brought the worship of Dodonian Zeus to the Achæans, with whom they amalgamated; this was also the route taken by the warlike Thessalians, when leaving Thesprotis they descended into the valley of Peneüs, and gave the name which that country bears to this day. The Thessalians were savages of enormous strength and ungovernable passions. They reduced to a state of vassalage those of the inhabitants who preferred to submit to force rather than wander forth from their beautiful home. These Penests, or "poor people," as the men bound to the soil by servile tenure were called, tilled the land for their masters, who constituted a kind of warrior-nobility, and even when other habits prevailed in the rest of Greece, they continued to lead, in their castles scattered up and down the country, an existence which finds a parallel in those Anactæ or lords described by Homer. The sort of existence it must have been, I can well picture to myself from the reminiscences which the hospitality of Turkish beys in the vicinity of Larissa and Pharsalia—before the province became incorporated with the Hellenic kingdom—has left on the memory. They loved feuds, booty, and adventure, good cheer and magnificent apparel; above all, they prided themselves on the number and beauty of their horses, that fed in the rich pastures of the lowlands and fields thick with corn. Like the Spahis, who formerly were levied in this province and supplied the most gallant and best-mounted troops to the Turkish army, the Thessalians were accounted the best horsemen in Greece. The difference is one of race, for the Thessalians could claim

Greek descent; though no great poets or artists were born to them, they were not destitute of letters and arts. Instances of sculptured works found here will be described in another part of this history, and if the fact of their having been wrought by natives remains obscure, there is no doubt that they were executed for Thessalian nobles and princes.

The people which the Thessalian tribes subjected or expelled were Bœotians, also called Arnæans, after their principal town Arne, lying at the foot of mountains that fence the plain to the southward. They were a branch of the Æolic Pelasgians, accustomed to a settled life, and grew rich in consequence of it. Those among them who did not care to acknowledge the new state of affairs, took the path trodden before them by the Minyi; they crossed Othrys and the Cætan passes, and spread over the Copæic valley which they colonized, between Minyan Orchomenos and Cadmæan Thebes. The latter fell to their hands along with the country which, after them, was called Bœotia. Thebes was in some sort looked up to as the head-centre; in any case her superiority was sufficiently marked to make it natural that no important measure should be carried without first having sought her advice, and that on her should devolve the presidency of any federation which might subsequently be formed in the land. Some towns, Orchomenos, Thespiæ, and Plataæ, made several attempts to resist this supremacy, but they were so harshly dealt with, that in the end they had to give way to the pressure of the Thessalian advance. That here they established a united Bœotia is proved from the spoken dialect, in which we recognize one of the main forms of Æolian; such differences as may be detected from one district to another are unimportant.

The movement of population occasioned by the Thessalian conquest, embracing the whole of Northern Greece, did not cease with the subjection of Bœotia by the Æolians from Arne. The same impulse had disturbed another tribe besides them, that of the Dorians, the consequences of which were of far greater moment, in that they were to effect the division and equilibrium of the several forces. The Dorian, said their most ancient traditions, had first inhabited Phthiotis, then Histiaëotis, as Northern Thessaly was called.¹ Whether on the brink of the Pagasæan Bay, in the vale of Tempe, or at the mouth of the Penæus,

¹ HERODOTUS.

they had an outlet on the sea. Here they had received the first impulses to action from the most advanced groups of the Hellenic race, with which they were brought in contact. In their seats on the western slopes of Olympus and Ossa were laid the foundations of the peculiar social customs and political order by which the Dorians ever stood out from among their brethren; here at any rate they first began to practise the worship of Apollo. This form of worship, whose influence was pre-eminently beneficial to mankind, was embraced with much fervour, and carried everywhere with them; they became its apostles, and diffused it among other tribes to such an extent as to have been credited, not without much show of probability, with having been the inventors of this civilizing religion. Doreus, said one of the genealogical tables in which the Greeks easily put all they knew, or thought they knew, of their origin,—Doreus is the son of Apollo; in which proposition, but in an inverted sense, modern science agrees. Apollo, writes Ottfried Müller, is the son of Doreus.¹

The religious conceptions of which the Hellenic gods are the embodiment, carry us back to so remote a period as to make it impossible to affirm aught in regard to the original home of those divine types that did not emanate from Semitic sources; nevertheless, when we cast about for the central point whence the worship of Apollo spread over continental Hellas, we naturally turn towards Northern Thessaly. The vale of Tempe was held as the actual cradle of this form of religion; every ninth year, a sacred procession travelled thither to gather a branch of laurel, which was carried with great pomp and deposited in his shrine at Delphi. The "sacred way" led through Thessaly, and its traditional stations help us to follow the gradual advance of the Apolline worship to the very gates of Delphi, where an altar already existed, raised to him by Cretan emigrants.² Here, where the two currents meet, one from the south, the other from the north, the god fixed his favourite abode, and through his oracle began to exercise an all-efficacious and powerful influence on the minds of the Greeks.

¹ OTTFRIED MÜLLER, *Die Dorier*.

² OTTFRIED MÜLLER has collected all the texts bearing upon the worship of Apollo Tempeitas, as an inscription designates him; as also upon the sacred way running from Tempe to Delphi (*Die Dorier*). With regard to Cretan influences, read the Homeric hymn to Pythian Apollo.

Amidst the perpetual movement to and fro of bands pressing forward towards Thessaly, each struggling for the richest lands, the Dorians, disturbed out of their possession of Hístiæotis, petitioned Heracles to interfere on their behalf. In return for his services they made over to him the third of the land for ever, and acknowledged his royal dominion as well as that of his descendants.¹ What we guess in these and similar stories is that the Dorian tribes, in a moment of danger, placed at their head an Achæan family, claiming descent from the hero, the tamer of monsters. In despite of their joint action, they are said to have been driven out of the territory into the mountain range of Pindus, and lost themselves among the highlanders that were to colonize Macedonia. Unlike these however, instead of invading the declivities turned towards the north, they opened a path to the southward, throwing themselves upon the Dryopes, and reappearing in the valley of Cephissus, between Parnassus and Cæta.² This fertile district was never relinquished by them, and in the days of the Roman empire it still went by the name of Doris. Such had been the transplantation of the Dorians into the heart of Central Greece, and now they were established on the neck of land which parts the Bay of Crisa from the Malian Gulf. During their long stay in Thessaly, they had become acquainted with a higher order of life, and the worship of Apollo had farther softened their manners and opened their intelligence. Upon the Dorians therefore, in consequence of their frequent change of abode, devolved the special mission of acting as intermediaries between the various populations surrounding them, gathering them into a mutual bond of fellowship. Hence it is highly probable that the initiative for the formation of the Amphictyonic league came from them, resulting in the combination of all the tribes from Olympus to the Bay of Corinth, which were linked together by a compact placed under the guaranty of the deity. The Thermopylæ were chosen as the meeting-place of one of the yearly gatherings of the Amphictyones in remembrance of the part the Thessalians had taken in the formation of this group; but Delphi became none the less the real federal centre. A proof that this political system was more specially the work of the Dorians, and that they were justified in regarding themselves as the second founders of Delphi, is the claim set

¹ DIODORUS.² HERODOTUS.

up later by Sparta to extend a kind of protectorate over the holy city, in virtue of her right to be considered as the pre-eminent Dorian commonwealth. It would appear that the names Hellenes and Hellas assumed now for the first time the character of an ethnical denomination. Accordingly the term Hellenes covered all the tribes that took part in the association, and Hellas the whole territory inhabited by them. In their passage through Peloponnesus, in their dispersion around the Ægean, Dorians and their auxiliaries alike carried this denomination in after days, and popularized it everywhere.

The extent of the territory occupied by the Dorians in that contracted Greece of which Delphi was the centre, bore no relation to the superior situation they had carved for themselves, or to the ambitious designs suggested by the consciousness of their numerical strength and integrity. Hence the desire to push further their conquests awoke in them with irresistible force. There never lived, says Herodotus, a more roving race than the Dorians.¹ Over the mountains which could be descried from the southern sides of Parnassus, rising on the further shore of the bay, stretched away the Achæan states of Peloponnesus, and the rumour of their wealth excited the best of the Dorian clans. They too were led by chieftains who claimed Achæan descent, and who now put forward claims upon the royal domains which they pretended to have received from their illustrious ancestor Heracles, unjustly deprived of his rights by Eurystheus. In its legendary form the tale of the successive invasions of these clans, and their final subjection of the whole peninsula, is known as the "return of the Heracleids."² The four Doric hamlets were not forsaken; but a host went forth, to swell whose numbers mountaineers poured down from all the surrounding districts, induced to join the expedition for the sake of plunder or adventure.³ They first tried to force a passage through Attica; and Hyllus is supposed to have advanced as far as the isthmus, where he was slain in single combat by Echimus of Tegea.⁴

¹ HERODOTUS: Δωρικὸν γένος πολυπλανητὸν κάρτα.

² Ἡ τῶν Ηρακλειδῶν κάθοδος (STRABO). The main Dorian tribe paid honour to Hyllus, as their ancestor and the son of the Tirynthian Heracles.

³ The third Doric tribe was called "Pamphylian," because it was made up of folk of different race and origin.

⁴ HERODOTUS.

This defeat stopped their advance, but not for long. After an interval of perhaps a hundred years, the invasion was happily accomplished by another route, that which were wont to follow the Æolian tribes of Western Hellas, closely related to clans of the same descent, having their seats in Ælis. After having turned Parnassus, and borne down whatever resistance they met in Ætolia, the Dorians crossed on rafts, near Nau-pactus, the bay which here is a mere inlet of the sea, and then penetrated inland. They first marched upon Argolis, the primitive home of the hero whose heirs their leaders pretended to be. But all reminiscences of the varying fortune which had attended the long struggle waged by the inhabitants against the intruders were forgotten. In some parts the Achæans compounded with the invaders, and divided the land with them without striking a blow; such was the case at Phthiotis;¹ elsewhere they stood out for their own. Many of their strongholds, Tiryns, Mycenæ, and Argos for example, were strong enough to check an enemy with no experience of siege-warfare, for it often became necessary to invest the place before final surrender. Innate energy and perseverance finally gave the Dorians lordship over the whole of the western and southern coasts of Peloponnesus, from Megara to Messenia. But they neither ventured into the valleys of Arcadia nor on the table-lands, which continued in the hands of the Pelasgians; nor did they penetrate into Ælis, where the inhabitants maintained themselves. In regard to the body of Achæans which had not accepted the supremacy of the triumphant invaders, it fell back on that piece of the northern coast where, up to that time, had lived peaceful Ionian populations, settled in the dodecapolis or twelve towns which rose here in succession, and had formed themselves into a federation having as religious centre the temple of Poseidon at Helikê. These towns fell one after another, and the territory which had previously been known as Ægialieis or strand, received the name of Achaia at the hands of its new lords. The vast majority of the Ionians took shelter in Attica; and in the peaceful inhabitants of Marathon they recognized people of the same kith and kin. Other Ionian detachments found there a retreat covered by the ramparts of Cithæron and Parnes, and from that time forth the Ionic element was supreme in Attica.

¹ PAUSANIAS.

The movement provoked by the invasion of the northern clans was fraught with other consequences. When nearly half Peloponnesus had fallen into the hands of the Dorians, there still existed, scattered up and down the country, fugitive bodies vainly trying to find habitations for themselves. The more productive tracts were no longer to be had; thus, in Attica, where arable land and water are so scarce, the last-comers had scarcely any other choice save that of being relegated to the steep and stony declivities of heights that would ill provide them with the means of subsistence. Elsewhere, on the contrary, on the Asiatic coast, where broader valleys and more spacious plains exist than in narrow, small Hellas, there were vast spaces as yet unoccupied, fat alluvial soil that only awaited to have seed dropped in the furrows opened by the ploughshare to bring forth the richest crops. Then too, close at hand, were the islands of the Archipelago, certainly less fertile, but where at least one would be safe from the too-encroaching Dorian. If in the Achæan commonwealths and the territory of the Ionian federation alike, a large body of the humbler folk—shepherds, labourers, and artisans—had found it hard to forsake the mountain-side where browsed their goats, or the plot which they tilled, or the workshop which made them almost rich, if they had preferred to submit to a division of the land, or payment in kind, which latter was not without advantages of a substantial kind, this was by no means the case with the royal families, the Pelopidæ, Nelidæ, and others still. With them it had been exile rather than surrender of their rights. They did not wander forth alone; but were accompanied by adherents who revered in them the glory of ancestors exalted in the strains of popular poetry. Under the auspices of these Achæan chiefs were especially gathered such bands as took to the sea in quest of new homes, either in the islands or on the shores of Asiatic Greece; whence for centuries past successive batches of emigrants had started for European Hellas, colonizing it and domesticating on her soil the first germs of culture. With the occupation of Peloponnesus by the Dorians, the current of population was reversed; it then began to flow from east to west, leading back thither, mixed with other elements, the descendants of Lycians, Carians, Leleges, and early Ionians; and thus the sons once more returned to the shores which their

ancestors had formerly left, following the sun's course across the Archipelago.

History,—for the term may fairly be applied to the events with which we are concerned—in the maritime emigration which then took place, specifies three main groups, differentiated from each other both by their composition, the route which they followed, and the date of their appearance on the world's stage. The first to launch its boats on the main would appear to have been the Æolian group, which we have also called Bœotian, because the several detachments constituting it started from ports held by Bœotia on the Euripus.¹ The Achæans driven out of Thessaly and Peloponnesus formed part of the colonizing expedition; the main body however was made up of Pelasgi and Æolians. The ships weighed anchor in the north of the Eubœan Channel. They skirted the coast of Thessaly, and moved along the shores of Thrace to the mouth of the Hebrus, where the planting of Ænus indicates the first stage of the voyage. Æoleum and Sestus on the European coast of Hellespont, Sigeum and Rhætæ on the Asiatic side of the strait, may be regarded as the next stations of the migratory bands. The Idæan peninsula was conquered slowly, and step by step; for its old inhabitants, the Dardani, fought for every foot of ground in the plain ere they fell back on the mountain of Ida, where they were cut off from the sea.

The strong position which the Æolians took up in the islands of Tenedos and Lesbos, facing the mainland, enabled them to renew at pleasure their attacks until final success crowned their efforts. Lesbos above all was of great service, lying as it does under the most genial of skies, with deep-cut harbours, fronted by the richest tracts, which soon became thickly populated and thrive exceedingly. On the Asiatic continent, the emigrants spread along the whole extent of coast and penetrated some distance inland; founding cities on their route, such as Assos, Antandros, Ælia, and Cymæ; they advanced to the head of the bay

¹ Αἰολικὴ ἀποικία (STRABO). With regard to the relative date and peculiar characteristics of the Æolian colonization, and the chiefs conducting it, every one of whom claimed descent from Agamemnon, Strabo will be found particularly helpful. Herodotus gives the list of the twelve Æolian towns of Mysia; in Thucydides, though he refrains from enumerating all the towns one by one, will be found a much clearer notion as to the extension of the Æolian element in the northern part of the Ægean which washes the coasts of Thrace and the islands.

where in earlier days Smyrna, built by other hands than theirs, had given it the name which it still preserves. They had been preceded by the Leleges on a spot which Nature itself seemed to have marked beforehand as the site of a great centre.¹

On this side the Æolians moved hardly beyond the mouth of the Meles, for when they reached this point in their southward advance, they were met by Ionians in quiet possession of the other side of the stream. Whilst the Æolians went round through Thracia and loitered in the Troad, which they subdued, the Ionians, though later at starting, were first to reach their goal on the central coast of Asia. Many were the points of departure; some had put out from the roadsteads of Peloponnesus, most however had weighed anchor in the havens of Attica, and struck eastward across the Cyclades. These were largely inhabited by Ionians, whose numbers must have been swelled, in places, by many a family which the ships landed and dropped along their route. The main body however pursued its path to the great islands of Samos and Chios; then they dispersed on the line of coast comprised between the Hermus and Mæander. Here, on the islands and the continent, the new-comers met, both on the headlands ruling the bays' entrance, and in the lowlands watered by copious streams, folk nearly related to them and speaking the same language. These cannot have treated as enemies the Ionians, who thus returned to their ancient home; it must have been an easy matter to come to an understanding, by giving a share to the newly-arrived population which brought to the older inhabitants a useful and strong reinforcement. Strife, on *terra firma*, only occurred on such points as were inhabited by Lydian populations, the small priestly state, for example, which had constituted itself at the mouth of the Cayster. There was here a temple to the moon-goddess, who personified the creative force of nature in the eyes of Asiatics, but whom the Greeks called

¹ STRABO. On the origin of Smyrna, consult *Beiträge zur Geschichte und Topographie Kleinasiens (Ephesos, Pergamon, Smyrna, Sardes)*, in Verbindung mit den Herrn Major Regely, Baurath Adler, Dr. Hirschfeld, und Dr. Gelzer, herausgegeben von Ernst Curtius (*Abhandlungen*). This collection contains a useful dissertation by Hirschfeld entitled: *Alt Smyrna*, accompanied by two plates. A study bearing the title: *La ville de Smyrne et son orateur Ælius Aristide*, by André Cherbuliez, which unfortunately was never finished, will repay perusal. The author was the father of Victor, the celebrated writer who began his career by a work on "the horse of Phidias.

Artemis when they adopted her worship. As with the sanctuaries of Pessinus and Comana, here also the service of the temple was discharged by a whole crowd of slaves of either sex.¹ Excited by orgiastic rites, women themselves took part in the fights that went on in the precincts of the temple. The reckless courage of these priestesses struck the imagination of the Greeks, and suggested to them the Amazonian type which holds so large a place in their poetry, and above all in their plastic art. For more than two score of years, the colonists settled on the northern point of Samos vainly strove to get a foothold on the lower course of the Cayster; they at last succeeded, under the leadership of the Athenian Androcles, and founded there a town which took its name of Ephesus from the local goddess. With the passage of time, the sacred building fell into the hands of the Ionians, but though the service—prayers and singing—was conducted in Greek, the rites never lost the stamp of their Oriental origin. This is evidenced in the very characteristic ceremonies that were enacted here and elsewhere, but above all in the strange and almost monstrous image representing the Ephesian Artemis.²

We know that if the Æolians and Ionians had thus effected a forcible entry into Asia, it was because they had been disturbed out of their seats by the Dorians. But these had no such cause for trusting themselves on the unstable element, and the risks involved in colonial enterprises. It is somewhat of a surprise, therefore, to see them carried headlong by the impetus acquired as it were in their former expeditions, swarming out of Peloponnesus by several issues, where they had earned for themselves such pleasant and goodly places. Closer inspection reveals the fact that they did but continue their march from north to south, which brought them through hill and dale, from the borders of Macedonia to the southernmost point of the peninsula, and that they shared in the strange mania which at this time caused "a general wandering of the nations" throughout Greece. At first the craze for displacement was confined to those clans that had been rooted out of their habitations, and whose regret for their

¹ On these slaves attached to the temple, and the orgiastic rites of Phrygia, see *History of Art*, under the heading of "Phrygia," etc.

² E. Curtius collected and commented with rare insight on the brief and scanty texts which bear upon the Asiatic beginnings of Grecian Ephesus and its famous Artemis.

lost native land was aggravated by the hardship and the difficulty of settlement; but ere long it spread everywhere, and attacked even such as were permanently settled, with more land, too, than they knew how to till. The restless impulse of migration was kept alive by the innate mobility of the race, the temptations which navigation held out for rich settlements, such as the early emigrants—so rumour said—had everywhere found. Wild tales were circulated as to the splendid opportunities thus opened out for desirable sites, the productiveness of the lands, the gains to be made by trade, on a vast continent the unknown depths of which concealed opulent commonwealths, themselves in relation with the great empires of the far East. From Epidaurus, Træzen, Argos, Megara, and Laconia, went out migrating bands wherein dominated the Dorian element. The Dorians spread in the southern Cyclades, Melos, and Thera; in the Sporades, where, to name but the most important islands, they seized upon Cos and Rhodes; in their advance they took in the Carian coast, and at the extremity of peninsulas easy of defence planted two cities, Cnidos and Halicarnassus, destined to a grand future. Detachments landed in Crete, where they met a large population already settled there, with families experienced in the art of government. Hence conflicts between invaders and invaded became inevitable; the arduous valour however of the Dorians, coupled with superior military discipline, in the long run gave them the day; they obtained a firm foothold in the land, and nowhere did the manners and institutions which were peculiar to them develop with greater originality. Considered as a whole, the movement of population which started from Epirus and terminated with the Dorian migration presents a well-defined character. In the beginning, northern Hellas subdues her southern sister; this is followed by the reaction of European Hellas against the supremacy which Asiatic Hellas had acquired and long kept in her grasp, resulting in the brilliant success of her European sister. Two points of time are to be noted in the sequence of this evolution; the first is the least known and consequently the most obscure. How is it possible, at this distance from the events, to estimate the effects which successive invasions, wholesale plunder, and devastation were likely to have on so vast, so prolonged a movement, upon which no light is shed by contemporary witnesses? In any case, we doubt not but that all these shocks and displacements wrought a temporary standstill,

mayhap even a retrocession in the march of progress. When, for instance, the Arnæans, seeing themselves disturbed out of their abodes, fell upon Bœotia, when Dorian bands struck terror throughout Peloponnesus, laying waste the land, surprising fortresses, or reducing their defenders by famine; all these commotions must of necessity have suspended, for a season, direct and indirect relations between Phrygia, Caria, and Lycia, between Phœnicia and Egypt, between towns like Cadmic Thebes, Tiryns, Argos, and Mycenæ, boasting one and all to have been founded by heroes that had come from Oriental regions. Maritime trade was either brought to a complete standstill, or at any rate greatly reduced in its activity; many raw products and models no longer found their way to feed an industry which already possessed considerable technical skill, in fact was very near rising to eminence, and in some of its works might be said to have attained thereto. Yet now it must not only have been checked in its advance, and languished everywhere, but on many a point have fallen to a very low ebb indeed. In the old days, Achæan princes had supplied it with the precious metals which they kept in the treasuries of their citadels, so as to have them transformed into richly-decorated armour, artistic furniture, vases, and ornaments for personal use. But when these princes saw themselves menaced by northern tribes, they were obliged to turn all the resources at their disposal in beating back an enemy whose power for mischief waxed from year to year; and then when all their means had failed, they too had wandered forth into exile. With them were scattered to the four winds of heaven the master-artificers whose training had been obtained in their service. These long troublous times brought with them a period of wretchedness, of economic and industrial decadence.

The decadence, however, was of short duration. The rude, warlike mountaineers, whose intrusion had wrought devastation and troubles of every kind, were closely related to the men whom they had overthrown. The dialect they spoke belonged to the common mother-tongue; they had the same natural aptitudes, the same secret instincts, and they worshipped the same gods. As soon as they got a firm foothold in the land which they had wrested from the earlier inhabitants, they drew around them Achæans, Ionians, and Æolians, all those masses of populations which had abandoned their native seats, whilst the

struggle, described above, was going on in the cities and lands of Central Greece and Peloponnesus. From the mingling of vanquisher and vanquished will come a new people, whose vigour will be increased by the infusion into it of a more abundant and younger sap. The chieftains of these reconstituted groups will take up again their predecessors' traditions, they will surround themselves, both in life and death, with a luxury which will forward industry and art. Greece, over whom they will hold sway, will be more thickly populated than the Greece of the preceding epoch, in that the migratory movement of the tribes of Epirus and Thessaly across Mount Ceta and the valleys dominated by Parnassus will go on uninterruptedly for the space of a hundred years; thence the current will flow, on the other side of the isthmus, throughout territories which in the main will preserve their old inhabitants. When something like order was re-established, we may take it for granted that some sort of Domesday or rough settlement of the various claims to the land was effected, even though nought resembling the name may have been known at that time. It then was, doubtless, found out that the narrow strip would henceforth have to nourish a far greater number of families than before the intruders' coming. Land boundaries had to be drawn in, towns were enlarged, villages multiplied, and land which had been allowed to lie fallow, was now brought under cultivation. The crowding was even greater, and the like measures had to be resorted to in districts such as Attica, which drew to itself fugitives from every quarter. Everywhere, in countries upon which conquest had fallen, as in those which it had spared, under the stimulus of want considerable progress both in social activity and intensity of the productive forces was made. Though the Dorian invasion interrupted for a while the soaring of Greek genius, and by a rude buffet closed the first phase of its development, it none the less prepared, from the very beginning, the second phase, that in which her genius will bring forth the marvellous Epos; whilst in the domain of plastic art it will foreshadow future excellence, producing works certainly still very imperfect, but wherein we feel that the standard aimed at is higher than that of the Mycenaean artist. When a fire is all ablaze, a faggot of green twigs thrown upon it will for a minute or two conceal the flame, and but for the vapour and smoke look as if it had been put out altogether; but ere long the wood

begins to crackle, and the flame bursts forth warmer and clearer than before, as it ascends to heaven.

That there was an excess of population at a given time, is proved by the frequency of encounters, displacements, confusion, and disorder, which provoked a general emigration of the masses. To account for the fact that conquerors having it all their own way should have followed the example of the conquered, without any apparent motive, we must assume that want of space made them dissatisfied with their lot. It was a fortunate accident which dispersed all these European Greeks on the western coast of Asia and the islands fronting it. Whether they were Leleges or Ionians who thus returned to establish themselves in their original homes, whether Æolians or Dorians who crossed the Archipelago for the first time, they all were somewhat different from their former selves, when they had navigated the sea as pirates, and scattered themselves afterwards in small bodies over vast areas, or got domiciled on the as yet deserted coasts of the Hellenic peninsula, where they had commenced to domesticate the wheat and barley, in order to replace acorns as their staple food, or when savage and violent they had swooped down upon the lowlands of Thessaly, from the gorges of Pindus. The first settlements had prospered; here by commerce and industry, there by tilling fruitful lands; markets had been opened along the coast, whither the inhabitants of the surrounding plains, of the mountains, valleys, and table-lands came to renew their provisions. Clustering huts had been transformed into permanent hamlets; the more important, when not encircled within walls, had placed themselves under the protection of strong castles in which resided their chieftains. The ruder populations had become humanized by contact with tribes having their seats near the sea, and in perpetual relation with strangers. When the whole country was thus "furnished and garnished," when relations beneficial to all concerned had been entered into, the next step to make them surer, was to bind themselves by solemn oaths to refrain from certain acts, so as to diminish border feuds arising out of a spring, a well or pasture, which often formed the bone of contention between these diminutive commonwealths. Hence associations were established on many points between the inhabitants of neighbouring districts, analogous to the Delphic Amphictyony,

and the Ægialieis federation of the Ionian cities. Men of different origin and speaking different dialects, amongst whom blood-feuds were rife, were brought to admit certain principles of humanity, and take counsel of one another on matters of general interest: thus had sprung up habits which the emigrants took with them to their new country. Colonists of the same group formed themselves into unions; the fact that their dwellings lay in close proximity to one another induced little acts of kindness and sundry dealings, such as are natural between neighbours; it inclined them to lend each other moral support, and sometimes in great straits substantial aid against the common foe. The impulse towards that political spirit which marks out the Hellenes from the subjects of Asiatic monarchies, was given by these federative institutions, so admirably adapted to the nature of the country, out of which was to grow and to be tried in turn every possible representative form during the political history of independent Greece. In the following age towns will come into existence. In that period we find the village, which is no other than the town in its embryonic state; for it possesses that which constitutes the town: a domestic hearth, around which are performed the rites relating to ancestral worship; these, when translated into the city, will be amplified along with the creeds upon which they rest. The public hearth will be conceived as uniting in itself all private hearths; each of the many sparks which make up the flame will represent a lighted fire. Above the divinized ancestors of each family there will stand the revered hero, common to the whole clan or γένος; and above the hero, he who, in virtue of a no less spontaneous hypothesis, will be regarded as the original author of all these generations of men, as the father of the fathers of all these clans, and as such will receive the most marked honours.¹ Security, the fountain of wealth, will assure to European Hellas—far too full of able men to stand in fear of invasions,—as

¹ It is scarcely necessary to mention in this place FUSTEL DE COULANGES' admirable work, entitled *La cité antique*. In it the author expounds with much show of learning and rare power of analysis, how the family household was built up, how a group of families formed the tribe, and how out of the union of several tribes sprang the town, the building up of which was the ultimate effort attained by these several units, on the basis of common ancestral worship, infusing life into it, and setting thereon its peculiar stamp.

also to Asiatic Hellas, until the rise of the Lydian dynasty of the Mermnadæ in the seventh century B.C., peaceful possession of the coast; agglomerations of houses, worthy the name of towns, will not only be multiplied, but thrive and increase in size as well. One after another they will procure the requisite appliances for carrying on such functions as are essential to social life. They will need a habitation sufficiently roomy to provide accommodation for citizens who shall assemble to discuss affairs of private or of general import; halls for the meeting of magistrates, or representatives of the principal families, primates, elders of the people, *δημογέροντες*, as they are even now called, or under whatever name they may be known in this or that locality; then too they must have a market-place where folk can circulate at ease, arsenals, docks, and above all, temples, the magnitude and lavish decoration of which shall testify to the reverence accorded by the community to its gods. All this will take time, and cannot be accomplished in a day, either on the east or west side of the Ægean, in the islands, or the two continents; but for one or two hundred years progress will be more rapid on Eastern Hellas than on European Hellas.

Whilst Hellenism thus extended its domain towards the east and spread over a vast territory, wherein political and intellectual existence from the outset were to assume so rare an intensity, the ground it had gained on the European side was sensibly curtailed. Epirus and Thessaly had almost been emptied of their inhabitants by the irresistible impulse which had impelled northern tribes towards the south, and those that were left behind were inadequate to fill the gaps thus made. Henceforth, true Hellas, the Hellas where the free citizen lives under the sole authority of the law, will mark her frontier line at the Thermopylæ and Ambracian Gulf. If Epirus and Thessaly are still reckoned as Hellenic countries, if their sons are admitted to those great national games, from whose lists Barbarians were sedulously excluded, they owed it largely to the halo surrounding the myths which originated in this region; they were indebted for it to the reminiscences of early generations which first had heard the voice of Zeus in the murmuring oak-leaves of the Dodonian forests, whose gaze, fixed on the snowy peaks of Olympus, had thought to discern above the forests and ravines filled with impenetrable mists, above the rushing sound of

impetuous torrents, the palace where the father of gods and men—Zeus pater—held his court.

The state of affairs which followed on the Dorian invasion and the foundation of New Ionia maintained itself down to the Macedonian conquest; its character is well defined, in so far at least as the term is applicable to the private individuals and human societies composing it. Of course a day will come when Asiatic Hellas, first subdued by the Mermnadæ, then by the Achemenidæ, will lose the start she had obtained in early times; when the true head-centres of the Greek world will be found in Europe, on continental Greece, because she possesses the enormous advantage of being covered against Oriental attacks by that sea which long familiarity turned into the most faithful ally the Greeks ever had. Many cities, Sparta, Thebes, and Athens, will strive for supremacy, and each succeed in turn; confederations of shorter or longer duration will gather around one or other of the centres laying claims to "hegemony"; balance however will be assured to the several ethnic groups, and their stability will remain unshaken through every change. Ionians, Æolians, and Dorians, whether in Asia or Europe, will retain the territorial situation which the return of the Heracleids and the displacements inherent thereto had given them. The distribution of these primitive elements will not be modified, nor will balance of forces be seriously disturbed by the destruction of two or three towns, in that like the Messenians and Plataeans they will be sure to return sooner or later to their former homes. What remains is a constituted Greece, set upon bases that will keep steadfast throughout the great movements of expansion and colonization of the eighth and seventh centuries B.C., when wider horizons shall open to Greek activity, especially towards the west, where the diameter within which its creative genius moves will be lengthened out to an enormous extent. Our conception of the first period of this history has been briefly indicated; it may be called its prologue, whilst our notion of it will be found in the picture we shall subsequently trace of the successive phases which industry and the arts of drawing underwent among tribes of Hellenic speech and blood. All we could do in this place was to note its main lines and general results; details and critical analysis must be sought elsewhere. In regard to Greek

religion, attention will be directed thereto in another section of this history. The original body of beliefs of which it is made up, certainly mount back to that primitive period whose historical significance we at this moment are trying to divine. We have no reason to doubt but that a certain class of small terra-cotta and bronze figures, attributed with great probability to this epoch, are simulacra of the deity; whilst several intaglios seem to represent sacred scenes. The means however which the arts of drawing possessed in order to express their ideas were so limited, that these instances of the plastic art do not help us to interpret the religious creeds which they symbolize, nor do they supplement the silence of poetry and the absence of written documents. Only when in a position to interrogate the epic poems and complete their testimony by that of painting and sculpture, shall we venture to deal in a comprehensive manner with the religious evolution of Greek intelligence; taking as our point of departure the vivid and confused impressions which it experienced when faced, on the threshold, by the spectacle of the world moving on to the ultimate and fruitful effort which gave birth to the great gods of the Hellenic Olympus.



CHAPTER II.

THE STONE AGE.

Why the Stone Age is represented in Greece by fewer monuments than in Northern Europe.

MAN is the same in every quarter of the globe ; his arts and industry have everywhere the like humble beginnings, no matter the degree of excellence to which they may ultimately attain. The picture which the name of Hellas is apt to call forth, when spoken, is a Hellas abounding in masterpieces, executed by a refined and well-informed art ; a noble architecture, to decorate which painter and sculptor joined hands. Nevertheless, like the nations of Central Europe, the Hellenes were ignorant, during a longer or shorter period, of the uses to which metals might be put, and the materials out of which they wrought their arms and implements were derived from bone, wood, and above all, the stone of their mountains. They too had a stone age. In the West, monuments of this period come out of the ground by thousands ; so that room can scarcely be found for them in our museums, which they are beginning to encumber. If in Greece they have only been pointed out within the last few years, and if very few specimens are seen in our collections, it is because until now nobody has cared about them. When the excavator tumbled about Grecian soil, what he hoped to discover, what he pursued with sustained zeal and enthusiasm in the depths of trenches he had opened, were small terra-cotta figures, painted vases, trinkets, and coins. He was far too much engrossed with these possible treasures, too obstinately bent on conquest of a particular kind, to heed rude tools which the eye singled out with difficulty from undressed stone. Yet had he chanced to descry

them, it is doubtful whether he would have stooped to pick them up. Nevertheless, there are valid reasons which render these instances of human industry highly interesting.

Until proof is shown to the contrary, we are bound to recognize in the folk who fashioned them the direct ancestors of the Greeks of history; the impulse whose first awakening we grasp here, is parent to the thought which in the days to come will have as its expounders Plato and Aristotle; whilst the hand which slowly polished these flint and diorite pieces, is the same which will carve in Parian marble the Hermes of Olympia, the Venus of Milo.

Since they bethought them of looking for evidences in this particular domain of man's earliest effort to emerge from barbarism, a considerable number of specimens has certainly been found in Asia Minor, the Archipelago, and continental Greece; but however far-reaching these investigations may be in the future, their chance of being as productive as in the West, or that the museum at Athens will ever show series to be compared, either in wealth or extent, to those deposited in the St. Germain Museum, is very poor indeed. The reason of its being so has been shown in our opening chapters; we said that ere the burden was laid upon the Hellenic tribes to correct and master, by sheer ingenuity, patience, and skill, the defects of materials, here untractable, there too soft and brittle, the examples and imports of the stranger had opened up to them novel and easier paths, of which they eagerly availed themselves. The stone age was here much shorter than in Central Europe, and in consequence of it far less productive; in this direction its labours fall immeasurably below the jade axes and sticks of command, as they are called, of the inhabitants of our cave and lake-dwellings, polished with marvellous care, and ornamented with designs both spirited, correct, and of rare elegance.

The science which deals with prehistoric antiquities had its being in countries washed by the Atlantic and North Sea, where the number and variety of objects permitted of such comparisons and observations being made, which in the end shed some rays of light into the undetermined depths of that dim and distant past. If, in the complete absence of dates, written testimony, or oral tradition, there can be no question of reconstructing the history of tribes which have left traces of their existence and arduous

activity in these vast regions, we are even now in a position to note and count the stages of their industrial advance; divine the order in which inventions and improvements of a practical nature succeeded each other, enabling these nations to attain a certain measure of culture, even before they had dealings with the Oriental and the Græco-Roman worlds. Leaving aside lacunæ and debatable points which, as remarked somewhat earlier, still exist, we shall find that experts, regarding solely the main lines and broad divisions, on the whole are at one in their conclusions. In this evolution, which must have covered thousands of years, they all distinguish two periods, which they call *paleolithic* and *neolithic*, terms which exactly explain the meaning attached to the words.¹

The paleolithic epoch is characterized in the West, in France and England for example, by rude flint tools that are found in ancient alluvial soils, on table-lands, and the breccia of caves where flint or bone implements of this class already show more finish, and are sometimes incised with peculiar designs. In Greece, alluvial deposits do not apparently contain flint implements akin to those of St. Acheul and Chelles, nor have caves as yet been discovered containing remains of stone and bone furniture, from which it might be inferred that they were inhabited during the primitive period, answering to those which came out of the grottoes of Périgord and other subterranean shelters in various French districts; nevertheless, in localities without number of the Hellenic peninsula, were collected objects of obsidian, blades, nuclei, arrow-heads, etc. They would almost tempt one to compare them with the flints of our diluvium and caves,—for like these they are unpolished and rudely cut—but for the fact that generally they are discovered in beds which for other reasons are held to have been formed within comparatively recent times.

¹ MORTILLET, *Le préhistorique. Antiquité de l'homme*; DE NADAILLAC, *Mœurs et monuments des peuples préhistoriques*, G. Masson (*Bibliothèque de la nature*); SALOMON REINACH, *Antiquités nationales, description raisonnée du musée de Saint-Germain-en-Laye*: I. *Époque des alluvions et des cavernes*. This work, whose first volume exclusively deals with the paleolithic age, will almost render unnecessary older books on the subject, in that they are all critically and precisely summed up in it; at the same time, the bibliography is as complete, the illustrations as satisfactory as could be desired. In these studies M. Reinach brings to bear the severe method which he has learnt by long experience in the school of philology and classic archæology, the want of which is very apparent with his predecessors.

Moreover obsidian, in its native state, is only found in the islands of the Archipelago,¹ the wrought pieces of which we come across on continental Greece were no doubt brought there by mariners accustomed to ply their boats in the Ægean; now, is it likely that this maritime trade can mount back to a time when the sole implements of man were blades and arrow-heads of such diminutive size as these? Axes of a certain power, *i. e.* of the kind that would have been required to cut and square timber, have nowhere appeared along with these small fragments. Hence we cannot consider these implements, notwithstanding their rude make, as belonging to a remote age. There are abundant evidences in proof that even when the use of metals was known, stone continued to be employed both for the needs of the chase and war, or out of regard for ancient customs in certain religious ceremonies.² We are of opinion, therefore, that despite what has been said to the contrary, paleolithic industry, so far as we know, is not represented on Grecian soil; and that assertions tending to suggest a different conclusion repose on misunderstandings or errors, mayhap even frauds.³

The leading features which best define the neolithic epoch in the West are the following: The stone implements of this period exhibit greater skill and finish; as a rule the hand which fashioned them has aimed at a higher standard, and succeeded in giving them a fine polish; this is particularly noticeable in regard to hard and finely-grained materials which approach precious stones, such as jade, jadeite, and serpentine—often, it would appear, imported from great distances. But now, side by side with stone implements, appear those which man early learnt to draw from clay. With them the potter's art may be said to have commenced. The use of the wheel and kiln are as yet unknown factors; but hand-made earthenware acquires sufficient consistency in the sun to last and serve its purpose. The shapes of the

¹ This is affirmed by Virchow, in a note communicated to the Anthropological Society of Berlin (*Sitzungsberichte*). In so far as the reports of these meetings deal with the monuments of the stone age of Greece, they will often be cited by us. They appear with special paging at the end of Bastian and Hartmann's *Ethnological Journal* (*Zeitschrift für Ethnologie, Organ der Berliner Gesellschaft für Anthropologie, Ethnologie, &c.*).

² *History of Art in Sardinia, Judæa, &c.* DE LONGPÉRIER, *Œuvres*.

³ MORTILLET, *Le préhistorique*, in reference to, or rather refutation of, Fr. Lenormant's views in the *Revue archéologique*.

vases exhibit considerable variety; whilst effort to give them a pleasing exterior is shown in the designs which adorn their sides. Both tools and vases are discovered in megalithic monuments, the funerary character of which cannot be questioned; or else are picked up on the sites of lacustrine stations, which latter are recognizable from the mass of relics, industrial and otherwise, left by populations long settled in houses overhanging the sides of the lakes, raised on piles.¹ These products are also met, mixed with shells, in *Kjoecken moeddings*, or kitchen-middens, sometimes covering no inconsiderable area; they are understood to be remains of encampments of tribes established on the coasts. Again, on more than one point have been recovered the actual sites of workshops in which these weapons and tools were made; the latter now rough-hewn, now nearly finished, lie side by side with the fragments of stone instruments which served to cut and polish them. The processes and amount of patient labour involved in their fabrication are clearly brought home to us by these finds, the perfect workmanship of which is truly marvellous. Several of the workshops lay within the circuit-walls made of mud which fenced primitive hamlets.

Between these earthworks which the spade and plough-share of the labourer have broken through almost everywhere, on these docks where countless obscure inventors spent their intellectual energy, in the ooze and gravel of these lakes, under stone blocks constituting sepulchres of rude grandeur, are found objects all of which belong to a unique civilization; a term hardly applicable to the preceding epoch, but which here comes nigh to being true. There are of course certain local varieties, certain inequalities of manipulation; but, considered as a whole, apart from these few exceptions, the monuments scattered over this vast region present rare uniformity of technique. Although its beginnings are linked with the paleolithic age, it is quite distinct from it by the wealth of its appliances, the variety and elegance of its industrial products. A further peculiarity which distinguishes it from the cultures of the nations of the Mediterranean, is that whilst showing considerable advance, in many respects it still does without metal. These nations, whose heritage has come to us from the Roman Empire, became acquainted with the use

¹ The word *palafit*, or *pilotis*, is derived from the Italian *palafitti*, fixed, stuck, piles.

of metals, through their large dealings with Africa and Asia, at so distant a period that no remembrance was preserved of a time when they were deprived of this resource.¹ The march of progress becomes more and more rapid as it advances. Hence we may take it for granted that fewer centuries were required to bring to perfection the art of dressing stone than had been the case in the preceding age. Whilst admitting all this, it cannot be denied that the sustained effort of many generations, implying a lengthy period, was necessary to obtain the complete command of the materials employed, when extreme dexterity of hand would make up for all deficiencies, whether of materials or tools. We have not, and probably never shall have, any data to help us to estimate, even roughly, the distance which parts us from the beginning of an industry allied to the beginnings of agriculture and the domestication of species which man bound to his career. In a general way we know the probable data of the introduction of metal, by different routes, among the nations of Central and Northern Europe. It was brought to the valleys of the Danube and Rhine, the Garonne and Seine, long before it reached the shores of the Baltic. Towards the opening years of our era, the revolution if not complete had been prepared, and copper, bronze, and iron replaced or were beginning to replace stone and bone. The substitution was effected more or less rapidly, according to localities; but henceforth even in those European districts most obstinately wedded to ancient habits, unmistakable signs announced the closing of the neolithic period, the end of a special culture, which notwithstanding its limited means knew how to cope with exigencies ever on the increase, and provided, not too clumsily, for the first wants of a settled and polite existence.

In the New and Old World alike, this industry, whose most insignificant result implies very considerable and prolonged

¹ The oldest Grecian poetry and myths alike always imply knowledge and use of metal. Lucretius' brilliant hypotheses, though they can hardly be taken as serious interpreters of tradition, are confirmed by the discoveries of modern science, and show that their author, through sheer poetical insight, had a clear and just notion of a humanity long deprived of metal—

*Arma antiqua manus, unguēs dentesque fuerunt,
Et lapides, et item sylvarum fragmina rami,
Et flamma atque ignes, postquam sunt cognita primum.
Posterior ferri vis est ærisque reperta.*

effort, preceded that wherein the task of the artisan is simplified and singularly abridged by the malleability of the metal, and its readiness to take any shape under the hammer which beats it out, or in the mould where it marries every salience and hollow. To admit that Greece alone of all countries had no stone age, we must suppose a people, already in possession of all the appliances of a superior culture, having landed on her as yet deserted shores and occupied the empty country. This hypothesis however is not only improbable in itself, but is belied by the Greeks themselves and the notion they entertained of their humble beginnings, as well as by the recent discoveries made at Hissarlik and Tiryns, where remains of the oldest settlements, in which all the handicrafts were still in their infancy, have been exhumed.

The Stone Age in Greece.

When we attempt to draw up the balance-sheet of the Grecian stone age, we are not beset by an embarrassing mass of materials, such as are beheld in other lands, Mexico and Scandinavia for example. The paucity of objects of this nature stands out all the more clearly that until the other day we knew not where to look for them. We cannot demand of them megalithic monuments, menhirs, cromlechs, and dolmens, for the simple reason that none are found in Greece or on the coasts of Asia Minor.¹ The pile-villages that were said to exist in Thessaly on the lake Bibeis, and in Macedonia on the lake Prasias, have turned out to be quite modern, having no connection whatever with the ancient palafit constructions mentioned by Herodotus. In them moreover no objects mounting back to antiquity have been discovered.² There is apparently as little

¹ The so-called dolmen which Dumont claims to have seen at Amorgos has never been found by subsequent travellers, despite diligent search for it.

² The talk respecting the discovery of the palafits in question, signed as it were by Herodotus, rested on Deville's testimony; but his Memoir, owing to his untimely death, was never published, and is only known by EGGER's summary in *Rapport sur les travaux des membres de l'École française d'Athènes*, 1863. Sir John Lubbock, however, affirms that the said dwellings are quite recent (*Man before History*), and analogous to the huts which Dumont noticed on the banks of Lake Bibeis.

reason for seriously regarding a stone- or flint-yard in Arcadia, near Orchomenos, or the kitchen-middens which have been pointed out on the shores of the island of Salamis.¹ On the other hand, our researches are facilitated by the knowledge that towns which in after days played so brilliant a part were often built on much older settlements; that when substructures or foundations were laid bare, instead of the looked-for classical buildings, they not unfrequently found remains of villages in which had lived the earliest inhabitants of the country. As already pointed out, apart from these sites it is more particularly on the table-lands that stone implements are picked up.² Of the different pieces representing this industry, fragments of obsidian and flints cut to a point muster stronger, and are gathered almost everywhere, Schliemann's excavations alone having yielded thousands of them. The largest crop comes from Hissarlik,³ but Mycenæ and Tiryns furnish fine specimens also.⁴ Pieces of obsidian naturally fall under two principal heads: slender cones fitted with wood or bone handle, to be used as sword or javelin (Fig. 1), and thin triangular blades, intended to go through the air and hit the mark at a distance. The two saliences often found at their base were to act as hooks, and keep the point in the wound which it had made (Fig. 2). Long fine blades, whether of knives or saws, are not uncommon (Fig. 3). The edge of the former is still capable of cutting soft

¹ Fr. Lenormant states having lighted, near Orchomenos in Bœotia, on the cast-off scraps of a flint-yard where axes of this material were made. But the specimen which he presented to the St. Germain Museum as hailing from this deposit, makes it plain that he was either mistaken or the victim of a stupid hoax (G. MORTILLET, *Le préhistorique*). No other discovery of this nature has been given out. True, DUCKER claims having identified kitchen-refuse on the coast of Salamis, but his evidence has found no favour among experts.

² *Revue archéologique*, 1867. Virchow, whose keen interest in the prehistoric antiquities of Greece is well known, formally states—from information which he obtained—that stone axes and implements of the like nature are found on the ground surface, in the fields and beds of torrents (*Ueber altgriechische Funde in Verhandlungen für Anthropologie*). Besides Virchow's note written for the Heldreich's collection at Athens, we have largely consulted DUMONT, *La collection préhistorique de G. Finlay à Athènes*, together with A. MARTIN, *Note sur quelques restes de l'âge de pierre en Anatolie* (*Revue archéologique*, 1877), including copious borrowings from SCHLIEMANN's three principal works: *Mycenæ*, *Tiryns*, and *Ilios*.

³ SCHLIEMANN's *Ilios, Town and Land of the Trojans*.

⁴ SCHLIEMANN's *Tiryns; Mycenæ* (translated by Schmitz).

wood or cardboard (Fig. 4). Saws are of two kinds: double-edged, with handle at the base, and saws with teeth on one side only, the other being inserted into a handle of wood or deer-horn secured with pitch, traces of which are still visible on one or two specimens. They are found in certain sepultures of the islands.¹ These saws, with their very regular teeth, are manifestly relics of a very early style of implements; but when discovered in a



FIG. 1.—Obsidian cones. Three-eighths of actual size.

country like Greece, they should be examined with the minutest care before pronouncing on their age.

In certain parts of Greece, Epirus, Thessaly, and Albania, the peasantry still uses, to thrash out the corn, an implement called *ἀλωνίστρα*, the "tribulum" of the Latins. It consists of a tri-

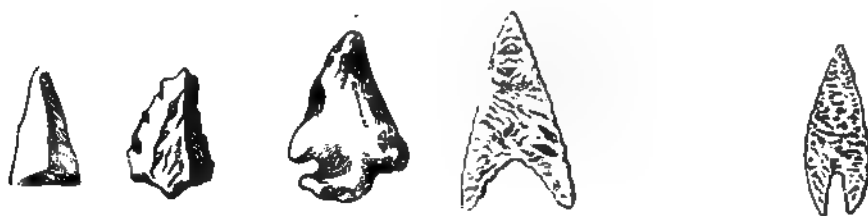


FIG. 2.—Arrow-heads of obsidian. Actual size.

angular board, provided on its lower face with pointed flakes or flints, in length about one centimetre and one centimetre across. Upon this plank, drawn by a single horse, stands the conductor,

¹ SCHLIEMANN, *Ilios*. M. Flinders Petrie lately discovered in the town of Kahan, formerly inhabited by workmen who built the Illahun pyramid, a sickle with wooden handle, wherein blades of this kind were fixed, with mastic, to the curved edge of the tool; a number of these flint fragments still adhered to the wood.

whip and reins in hand. The sharp stones chop up the straw and beat out the grain from the husks. That obsidian was so used until recent times is highly probable, since pieces of this material are often found on the sites of ancient thrashing-floors.¹

These species of knives easily drop out or get broken; whilst admitting that alônistras may have sown them in great abundance on the soil surface, it would be impossible to view in this light every fragment of obsidian to be found in Greece; the very characteristic specimens, for example, of our illustrations. It may well be that some of the stones of these thrashing-boards are really old, and used by the husbandman because he finds them



FIG. 3.—Flint knives.



FIG. 4.—Flint saws. Two-thirds of actual size.

ready to his hand; but nobody has ever yet seen on continental Greece an alônistra whose gear was entirely composed of obsidian; whilst, to our knowledge, the stone is not imported from Milo on anything like a large scale.² Hence we may assume that when obsidian is found side by side with flint and other native stones in the gear of these agricultural implements, it is because before the domestication of bronze and iron it was found a sufficiently valuable article of commerce to have been brought in such vast quantities to the early inhabitants, that their descendants still utilize remains of these old importations, which they pick up on many a spot lying near the water or some such natural advantage, which in by-gone days caused it to be selected for a permanent settlement.

¹ M. E. BURNOUF's letter in the reports of *L'Académie des inscriptions*.

² DUMONT, *La collection préhistorique de M. Finlay*.

It is unnecessary to insist upon another blunder in connection with obsidian and flint-heads; the first specimens which attracted to themselves the attention of specialists came out of the tumulus or common burial-mound raised by the Athenians to those of their fellow-citizens as had fallen in the battle.¹ It is undoubtedly true, according to Herodotus, that the missiles of some of Xerxes' auxiliaries, in default of iron, were points of flint;² but the soldiers to whom he ascribes these very primitive weapons were recruited from the barbarous tribes of far-off Ethiopia, and that these should have formed part of the picked corps which under Mardonius was to operate in Attica, is in the last degree unlikely. Accordingly the term "Marathon-arrows," sometimes applied to darts of flint and obsidian, is a misnomer, since it would leave unexplained objects of the same nature found all over the country. If they have been discovered in a funereal mound, it is because they were mixed with the earth forming it, which had been taken from one of the earliest inhabited districts of Attica, *i.e.* the plain of Marathon.

There is yet another series of instruments which a widespread superstition, not easily accounted for, has done much to popularize: we allude to axes of polished stone largely represented in our collections. They are thought by the peasantry of Anatolia and Greece to have fallen from heaven; and therefore held as a kind of talisman, and as such are supposed to be a protection against lightning, and a cure for certain diseases. The Turks call them "ildirim tachi," of which the German "Donnerkeile" and the French "pierres-de-tonnerre" are exact equivalents; whilst the Greeks designate them under the name of *ἀστροπελέκια*, "astral stones." Pliny, in a curious passage which shows that this peculiar belief was widely diffused among the ancients, has the following: "Sotacos distinguishes two other varieties of thunder-stones, or ceraunites, which he says resemble axes, and are red or black; the latter are generally round and ruled to be sacred, in that they help the storming of cities and the capturing of ships. They are sometimes called 'bætuli'; strictly speaking, however, the term 'ceraunite' should be solely applied to oblong or conical stones. There is yet another kind of ceraunite, found only on spots struck by lightning, and extremely

¹ LEAKE, *Travels in Northern Greece*.

² HERODOTUS.

rare; they are greatly prized by magicians, who use them in their operations."¹ Pliny's evidence as to the veneration in which *bætuli* were held is corroborated by the number of axe-like thunder-stones—which we must fain recognize as belonging to the neolithic period—dating from the last days of paganism, and bearing upon them formulas and mystic symbols. Such would be the specimen Fig. 5, originally found in Argolis, but now in the museum at Athens. Below a long inscription, of the kind known as *abraxas*, is engraved a scene representing

FIG. 5.—Stone axe from Argolis. Actual size.

a priest and a Roman soldier, apparently in the act of performing an initiatory ceremony.

There is nothing improbable in the view which would connect these superstitious notions, whence arose what has been termed "axe-worship," as the abiding recollection of services rendered by the implement to nascent culture.² The axe was pre-eminently the instrument of far-off antiquity; it had many uses, whether for purposes of a domestic or a warlike character. That Asia Minor and Greece, like Northern Europe, set great store by hard and resisting substances, and had them brought from great distances,

¹ PLINY.

² DE LONGPÉRIER.

is proved by the number of jade weapons found on ancient sites ; twenty-six axes of green and one of white jade were unearthed by Schliemann at Hissarlik alone.¹ Now experts are agreed that no such stone exists in Anatolia ; to find it one must travel to the Kuen-Lun Mountains, *i. e.* to the very heart of Asia. In their opinion this mineral comes from Khotan, and must have found its way to Anterior Asia, either wrought or in its native state, by successive barter across the Iran plateau or along the Oxus, which then still discharged its waters into the Caspian. At the end of their long journey, the price paid for jade was certainly a very high one, but its owner found compensation in the match-

FIG. 6.—Nephrite axe. Actual size.

FIG. 7.—Red jasper axe. Length 15 cent.

less qualities of the weapon, which in power and duration easily surpassed all others, much as a fine steel blade is superior to one of soft iron. Jade, it should be remembered, is the most resisting stone in existence, and can hardly be crushed by the heaviest hammers. Whether wrought in its original home or in the lands where now we find it, there is no doubt that it was fashioned by the slow, wearing process of emery. Polished axes such as that of Fig. 6 imply an enormous amount of patient labour.

After jade, serpentine seems to have been very largely used ; though of no great hardness it is sufficiently compact to withstand the blows of the hammer without being shattered to pieces ; next come jadeite, jasper, hæmatite, porphyry, and diorite, all of

¹ SCHLIEMANN, *Ilios*.

which could be obtained nearer home. Single-edged axes with helve of bone or wood, fitted to what may be called their base, are plentiful (Fig. 7); axes with double edges and central

FIG. 8.—Double-edged axe. Actual size.

perforation, into which was inserted a handle of wood or bone cemented with pitch, also occur (Fig. 8). This last helve was

FIG. 9.—Perforated axes: hæmatite and porphyry. Half size.

far away the most secure; very probable restorations of both styles are preserved in the museum of St. Germain.

Rare in the West, these axes are non-existent in the *Ægean*, save in the Troad, where, says Schliemann, they are quite

common. Two beautiful specimens appear in his *Ilios* (Fig. 9).¹ Writing of Oriental art, we explained how the hardest stone may be pierced with perfect success by means of moist sand worked with a reed or small wooden staff.

Notwithstanding the proverbial patience of Orientals, many a tool from Hissarlik shows that the artisans got tired of the tedious boring process, and left off in the middle. As will be seen from Fig. 10, considerable progress — but never carried through — was actually made on either face of a diorite, half



FIG. 10.—Diorite axe. One-fourth of actual size.

FIG. 11.—Axe. Length 10 cent.

FIG. 12.—Attic axes.

hammer, half axe, *i. e.* obtuse at one end, sharp and pointed at the other. The vast majority of axes, however, are without central perforation, and occur almost everywhere. Some, such as those that came from the Finlay collection (Figs. 7, 11, 12), are exceedingly slender, and the first measures fifteen centimetres. As a rule, axes found in Greece and Asia are smaller than numbers of those seen in the collections of Northern Europe.² They are rarely if ever polished throughout; more particularly is this the case with specimens that were real weapons; no attempt having been made to extend the polish beyond the edges and surrounding parts. They are utterly devoid of artistic intention;

¹ SCHLIEMANN, *Ilios*.

² VOSS, *Verhandlungen*, &c.

and in no respect can they challenge comparison with the fine products of the neolithic age of Northern and Western Europe.¹ All the axes which we have passed in review have the air of having been put to many uses; nevertheless we also light upon diminutive axes, which must be regarded as amulets, and the object of a special worship. A hole has often been drilled through them, making it plain that they were intended to be hung about



FIG. 13.—Jade axe.



FIG. 14.—Amethyst and Cornelian axes. Three-eighths of actual size.

the neck (Fig. 13). According to MM. Heldenreich and Dumont, very similar axes, worn about the person, are not uncommon at the present day in Greece. They go by the name of *φυλακτήρια*, "preservatives," and are supposed to guard the wearer against disease and the evil eye.

Were further proof needed to establish the talismanic character of these amulet-axes, we should find it in the precious



FIG. 15.—Points of polished stone. Actual size.

FIG. 16.—Stone chisel. Actual size.

material out of which not a few were made: the Finlay collection alone has furnished two, a cornelian and an amethyst; which latter is a real axe in small, evidenced by its fine cutting edge and indentations showing where the handle was fitted on (Fig. 14).

If we have mentioned and reproduced specimens of amulets, possibly not very ancient, but always notable for fine polish, it was with no intention of carrying them back to ages preceding

¹ VIRCHOW, *Verhandlungen*.

the introduction of metal; but because their place not only falls naturally here, but that they call up to the mind the image of those early days, when the instrument of which they are a reduced copy was in everybody's hands.

The nature and use of another class of stone instruments are not so easily defined; they are apparently a kind of stilettoes or drills of jade and ophite, and probably used to pierce holes into leather or thin planks (Fig. 15). From Sardes comes a pair of scissors very similar to the kind used by our carpenters; one of the blades alone is grooved (Fig. 16). It is plain that hammers without pick, of which quite a large harvest is to hand, can only have been used to break hard substances. Some have

FIG. 17.—Hammers. Three-eighths of actual size.

a hole drilled through them (Fig. 17), but they form the exception, not the rule (Fig. 18). Undoubtedly most had handles, a few however, such as the massive instrument Fig. 19, lack this appendage; an indentation in the middle enabled the hand to grasp and hold the implement. Both ends are battered by long usage. Rude balls, seemingly intended to bruise the grain on a flat stone (Fig. 20), were likewise void of handles.

Grind-stones for obtaining meal came in much later. The stone pestles and mortars still used by the peasantry of Asia Minor, where mills are not obtainable, for pounding barley and corn into a coarse grit which they boil in milk, are not unlike those found at Hissarlik (Fig. 21). Truncated cones (Fig. 22), or objects more or less cylindrical in shape, should be recognized as polishers; a concave curve about their middle facilitated

prehension (Fig. 23). The care with which the terminal sections of these instruments were dressed, suggests the notion that though

FIG. 18.—Hammer. Actual size.

FIG. 19.—Hammer. Diorite. Half size.

they may now and then have played the part of grinders, their usual and chief use was to smoothe clay vessels before

FIG. 20.—River stone. Half size.

they went into the kiln. Whilst the wheel spun round, the downward pressure of the hand sufficed to distribute evenly the

clayey chuck or block; but so long as the potter was without this simple and marvellous instrument, the polisher was indis-

FIG. 21.—Mortar and pestle. Basalt and hard calcareous stone. Half size.

pensable for correcting defects of modelling, and effacing traces left by the fingers on the body.¹

FIG. 22.—Polisher. Hematite. Half size.

In those early days the polisher was not applied to pottery

¹ The polisher was never given up even after the invention of the wheel. "The apparent fineness of the exterior of the vases," says Birch, "is solely due to the care with which the surface was polished by artificial means or the hand."
—TRANS.

alone; with it also the last touches were given to bone and horn implements, to knives and axes previously dipped in moist sand. That sand was employed in the process has been placed beyond the shadow of a doubt by closer inspection of these axes; under the microscope have been discovered fine striæ left there by the grains of sand which served to polish them. It is regrettable that the same test has not been applied to the like instruments from Greece. No information has yet reached us from Asia Minor or Hellas, but no doubt some day or other, when they take the trouble to look for them, will be found those fixed polishers contrived in huge stone masses, to which the workman repaired to give the finishing touches to



FIG. 23.—Polisher. Black marble. Actual size.

Polisher. Reddish marble. Two-thirds of actual size.

Polisher. Granite. Two-thirds of actual size.

the weapon in hand. He began by putting it into an oblong basin, with a very smooth bottom, or a wide groove hollowed out in the corner of a boulder, with just enough water to cover it; then with a rapid and continuous movement he worked it up and down until friction had removed every roughness and salience.¹ Stone industry, more than all its fellows, as soon as it emerges from the first gropings and impulses after a certain elegance, requires polishing practices; in this way alone can it make up for inadequacy of tools, which yield very imperfectly cut, uneven, and seamy surfaces. A certain number of *nuclei*, as they are called, show us blocks out of which were obtained

¹ MORTILLET, *Le préhistorique*. De Mortillet states having made out one hundred and twenty-seven of these stationary polishers, distributed over thirty-seven French departments.

by cleavage pieces to be made into hammers, axes, and arrow-heads (Fig. 24).

It was something to have succeeded, by processes just referred to, in providing themselves with instruments capable of attacking and cutting substances of considerable resistance; the next step was to find out how to maintain their trenchant

FIG. 24.—Nuclei. Obsidian.

edge, which in time usage would blunt. Hence sharpening-tools or whet-stones came into being; for we must consider in this light those long flat plates or slabs, found in countries the most diverse, in America and Europe.¹ The hole at one end was intended for suspension, the stone having been apparently worn about the person, tied with a string, so as to have it



FIG. 25.—Grindstones. Green and black schist. Half size.

ready to hand, for whetting the weapon or tool as occasion should require (Fig. 25).

Most of these slabs were of very hard schist; experience having taught them how well suited was this stone for the purpose. This, and other indications, help us to determine the real destination of these implements, which at one time was ill understood by the scholars who first called attention

¹ SCHLIEMANN, *Ilios*.

to objects of the stone age gathered together in Greece and Asia Minor.¹

To these curious instruments, whose character and probable use are easily divined, may be added, by way of reminder, some pieces of no particular interest, whilst the object for which they were made is at present obscure. Schliemann published a kind of disk of granite, oval shaped, having a deep groove around its edge (Fig. 26); the groove can have served no other purpose save to insert a piece of cord; it doubtless was a weaver's or a fishing-net weight.

Finally, it is hard not to recognize missile-weapons, probably sling bullets, in those oblong-shaped stones exemplified in Fig. 27. There is nothing to prove that they all belong to

FIG. 26.—Weaver's weight.
Half size.

FIG. 27.—Sling bullets. Three-
eighths of actual size.

a primitive epoch; for though lead displaced stone, we have no evidence to the contrary, that when metal failed recourse was not had to the older and more familiar weapon. This applies in full to whorls or fusaïoles, thousands of which have come out of the ruins of the earliest cities. They are mostly of baked clay; fusaïoles of steatite and coloured stones, however, are by no means rare. Their purpose matters little; what is specially important is that here as elsewhere, before they knew how to fashion, bake, and decorate a whorl of clay, they had to be content with a holed stone, so as to fix it to the cord it would stretch out.

We think we have now pointed out the principal and most

¹ Not heeding, apparently, that the slabs in question lacked the needful solidity to withstand a violent shock, in the first instance they were placed by A. Dumont among the axes (*Collection préhistorique de M. Finlay*). In his catalogue, A. Martin refrained from any attribution (*Revue archéologique*, 1877).

characteristic shapes which the old inhabitants of Greece gave to their tools; enough in fact to illustrate the opening chapters of this Art-history. Stone industry here passed through precisely the same phases as in northern lands; they all began at the beginning, whether in Greece, Gaul, or Scandinavia. The difference is one of time, which in the case of Hellas was so singularly shortened, that she may be said to have had no neolithic period to speak of, taking the term in the sense which experts assign thereto. Stone however, during a period which it is impossible to estimate, was largely used because metal was still scarce. This age it is—the tag end of an older state of affairs—which we had at heart to make known; no item relating to the beginnings and early gropings of Hellenic genius being void of interest for the historian.



CHAPTER III.

THE PRINCIPAL CENTRES OF MYCENIAN CIVILIZATION.

Method to be followed in the Study of this Civilization.

IF we began by grouping in a special study the information which is concerned with the stone age, and if its monuments were classed by us rather from their character and supposed function than from what we know of their origin, it is because they do not belong, for the most part, to populated centres whose name history has recorded. What they represent is the first effort of a primitive people to emerge from barbarism; a status extending to the several clans of which it was composed. Given the paucity of means at their disposal, the results, with perhaps trifling differences, must necessarily have been very similar on different points of the same district. Speaking generally, habits and practices cannot have greatly differed from one population to another, from the eastern shores of the Ægean to its western coasts, or among the isles dotting the broad expanse which intervenes between Europe, Asia, and Africa.

True, in order to define these effects and conditions we have appealed to a certain number of antiquities hailing from historic centres, where they were found among other remains implying a more advanced culture, one acquainted with the use of metal. For, be it remembered, the employment of stone implements did not abruptly cease the day when the first weapons and the first metal tools made their appearance among tribes that had hitherto only been served by diorite, serpentine, and flint instruments; metal ones continued for a shorter or longer period to be rare and valuable objects. Only slowly and by degrees, and as metal became more common, was stone discarded. Clearly the best

preserved among the products of any art or industry are the most recent, those that have been exposed for a shorter time to the manifold risks which threaten destruction to the handiwork of man.

Thus the finest specimens of stone-work have come from Troy, Tiryns, and Mycenæ, towns where metal was already applied to all the usages of life. Primitive industry survived itself there, so to speak; the objects which it continued to turn out were now but a make-shift which made good the insufficiency of work furnished by the smelter, the smith, and the goldsmith. But as long as it endured, its activity, though much slackened and in a moribund state, adhered to the processes it had received from far-off inventive and laborious ancestors. We used but our right, then, in calling in the testimony of jade axes and other instruments of the same class, found beneath the ruins of these famous towns, to complete the all too fragmentary information derived from chance finds on the soil surface, on points where no trace of ancient urban agglomerations has been preserved.

In tumbling about the ruin of cities whose names often recur on the lips of the Epic bards, we descried a somewhat advanced society, in the midst of which groups more or less favoured by the natural advantages and other circumstances attending the sites they had chosen, attained, each group for itself, a development of varying degree, but which we are enabled to measure from buildings partly preserved, and from separate finds discovered among these ruins and the adjacent necropolises. The resemblances observable between these buildings and objects, are sufficiently marked to lead us to place the scattered and successive work of all these small communities under a general denomination, embracing as it does the art and industry of clans that occupied the basin of the Ægean during their transition period, when they shook off the trammels of barbarism. The passage from a semi-savage state to an almost settled condition was effected in the course of their countless migrations and movement to and fro, finally establishing themselves in positions which they were fated to keep for ever, and become the Greek nation. The bustling and progressive activity of these tribes seems to have commenced on more than one point at once; their efforts are visible on scenes apart from one another, yet not too distant to preclude their entering into relations of sufficient frequency and intimacy with each other as to have dowered their handiwork

with a general family air. These tribes were separated by mountains or the sea from one another, and did not own allegiance to a supreme head; each obeyed its own chief and lived its individual and independent life. The designation applied by contemporary archæology to this civilization has found general acceptance. ~~The state which~~ had Mycenæ for its capital appears to have been the most influential among those that constituted themselves on continental Greece, during the four or five centuries that went on before the Dorian invasion. This view of the case is strengthened by the Epos, for it places Agamemnon, the king of Mycenæ, at the head of the princes arrayed against Troy. Study of the ground has confirmed literary evidence. The ruins of the circuit-wall and the Mycenian buildings are the most imposing of all those that apparently go back to what is sometimes called the heroic age; and on no ancient site have excavations yielded so much wealth, or conveyed the notion of so fine a development of art and industry. Among the discoveries which for the last thirty years have disclosed to us a Greece totally forgotten and older than Homeric Greece, none have created so deep an impression as those made on the Mycenian acropolis. These, far better than aught else, have furnished us with the means of defining this civilization, and at once singling it out from the civilizations, whether of Egypt, Asia, or classic Greece, of which latter it forms as it were the preface. Although it knew of the elder cultures, it was not directly derived from either of them. Finally, there is another reason which of itself would have dissuaded us from setting aside the consecrated appellation, in that we should have been sorely puzzled to propose a new or better one. That which heads this chapter has at least the advantage of being at once understood wherever Hellenic studies are cultivated. With due reserve, then, we shall retain it, happy if in the end we succeed in determining with more precision than was formerly possible, the principal characteristics of what we will continue to call "Mycenian civilization." Although we are still perplexed by many obscurities, many unsolved problems, discoveries dating but from yesterday have shed somewhat of light on this mysterious culture, on its beginnings and affinities, as well as the relations it entertained with the stranger, and the secret ties which connected it with a later evolution of the Hellenic mind, and its supreme unfolding.

Here the expository method cannot be the same as when all we had to do consisted in carefully selecting a few examples of stone manufacture, calculated to give some notion of what had been attempted and achieved, within the limits of a region which was fated to be the exclusive domain of the Hellenic race. The points now to be examined are no longer concerned with the elementary industry of semi-nomadic and almost barbarous populations, but with the products of an orderly and fruitful activity. We are in presence of sedentary clans that have taken firm root on heights where, covered by fortified walls sedulously kept in repair and enlarged to accommodate an ever-increasing population, they make their first attempts at town life. Here are beheld important structures which imply technical knowledge and resources of no mean order, showing that their authors had left the age of infancy behind them. On the spots where the results of the excavations have been most satisfactory are found houses of ordinary dimensions, alongside of palaces and enormous ramparts soldered on to the rock forming the sides of ravines which they overhang, together with tombs brimful of glimmering gold and silver composing royal ornaments. The works of that early date have all many points in common, and the result is a general resemblance between them; nevertheless, as soon as we examine them in detail, we perceive features that serve to distinguish the products that reach us from Troy from those made at Tiryns or Mycenæ, only to name the principal sites where antiquities of the class under consideration are most plentiful. Then, too, certain forms met with at one place are non-existent at another, because the objects are not all coeval, and that hundreds of years perhaps may very likely intervene between the oldest and the youngest. Other antiquities again, although contemporary or thereabouts, differ from one another for reasons of origin; between the Troad and Argolis there is the breadth of the Ægean. Why assume that the march of progress was everywhere uniform and effected at the same time? May there not have been intellectual inequalities of which we have no means of judging at this present date? The Asiatic and European shores were not turned to the same winds or swayed by the same influences. Among those that prevailed more or less throughout the eastern basin of the Mediterranean, a certain proportion must have made their action more strongly

felt on the one side than on the other. Each of the settlements whose ruins we are sounding has a distinct physiognomy and individuality of its own, every one of which ought to be found in the general picture wherein is imaged, under its manifold aspects, the strange and incomplete civilization we are endeavouring to reconstitute.

In such conditions, the historian must needs transport himself to the main sites where excavations on a grand scale have been carried on most successfully. These at first so startled and confused the learned world, that it is only just recovering its equanimity. We shall describe them one by one, briefly indicating the result of those memorable campaigns, both from Schliemann's and Dörpfeld's observations which they made on the site of their discoveries, verifying at the same time their assertions and conjectures. We shall say how we are led to picture to ourselves the arrangement and aspect of this or that town, so marvellously exhumed by them. Such monographs will appear in chronological and geographical order, in so far at least as this is possible. Not until they have passed before the reader shall we venture to submit to him our general conclusions and formulas, which sum up all it is possible to know at this date in regard to the industry and arts of the so-called Mycenaean epoch.

Thera and its Prehistoric Ruins.

The island of Thera, now Santorin, naturally heads the list of sites which still preserve traces of the earliest culture effected on Grecian soil; here are evidences which, when juxtaposed, enable us, if not to date the extant monuments of this period, at least to indicate approximately the extreme limit over which they cannot be led without offending probability.¹

¹ We have throughout this chapter followed M. Fouqué, who spent several years at Thera, that he might study on the spot the volcanic manifestations of which quite recently it has been the scene. For ampler information we refer the reader to his capital book entitled, *Santorin et ses éruptions*. He has also allowed us to see an unpublished Memoir and drawings of another geologist, M. Gorceix, who, with M. Mamet, a member of the French school at Athens, visited the island. See also GORCEIX and MAMET, *Bulletin de l'École française d'Athènes*, 1870; *Comptes rendus de l'Académie des sciences*; MAMET, *De insula Thera*. Nor

Thera is crescent-shaped, and the southernmost of the Cyclades. Its arc is continued by the island of Therasia and the islet of Aspronisi (Fig. 28). Several other islets, Palæa, Nea, and Milkra Kaimeni, dot the bosom of these waters, whose mean depth is over 300 metres. There is no safe anchorage for ships, except over the submerged volcanic cone, whose summit is seen a few yards below the liquid surface. All these islands, great and small, are made up of volcanic rocks, with the single exception of Mount Elia, commanding the principal island from a height of 800 metres. Mount Elia consists of marble and metamorphic rocks; the peak itself is the relic of a continent which in the beginning of the tertiary period was joined to Greece and Africa. Its mammals were the same as those whose remains have been exhumed by M. Gaudry at Pakermi, situated at the foot of Pentelicus. Towards the bay, the hills of Thera have been cut into almost perpendicular walls, which opposite Therasia rise to about 400 metres; but on the other sides they descend in gentle acclivities towards the sea. The lofty coasts fronting the bay, both at Thera and Therasia, exhibit horizontal beds of lava, intersected by vertical bands representing the chimneys through which the volcanic fluid was belched out. The commencement of the pliocene tertiary epoch witnessed the subsidence of the ground which fashioned the coasts of the Mediterranean pretty much as we have them at the present day. This change was not effected without deep dislocations and rendings of the soil, through which igneous matter escaped, thus giving birth to Greek volcanoes. The main crater of the mightiest, perhaps, lay towards the centre of the basin now parting Thera from Therasia. Its fiery streams produced a gradual rising of the ground; new masses came to solder themselves to the small island of St. Elia, the sole relic of a great land now disappeared; whilst slowly but steadily the volcanic peak emerged out of the waters, and surrounded itself with lowlier fellows. Thus, out of elements differing in age and composition, was formed a great

should the chapter which Dumont devotes to these discoveries in Vol. I. of his *Ceramiques de la Grèce propre*, chap. ii., *Type de Santorin*, be left out of account. He had under his eyes, when he wrote it, the whole Santorin collection, consisting of vases and other antiquities picked up by MM. Gorceix and Mamet, classified and preserved by the care of M. E. Burnouf in one of the rooms of the School at Athens.

island, which took up the whole expanse now occupied by the bay. Two peaks sent their heads aloft in the central part of the island, *i.e.* those of St. Elia and the volcano; their flanks, down which had slipped and spread belchings of every sort, stretched to the coast with a gentle incline; the soil being rich

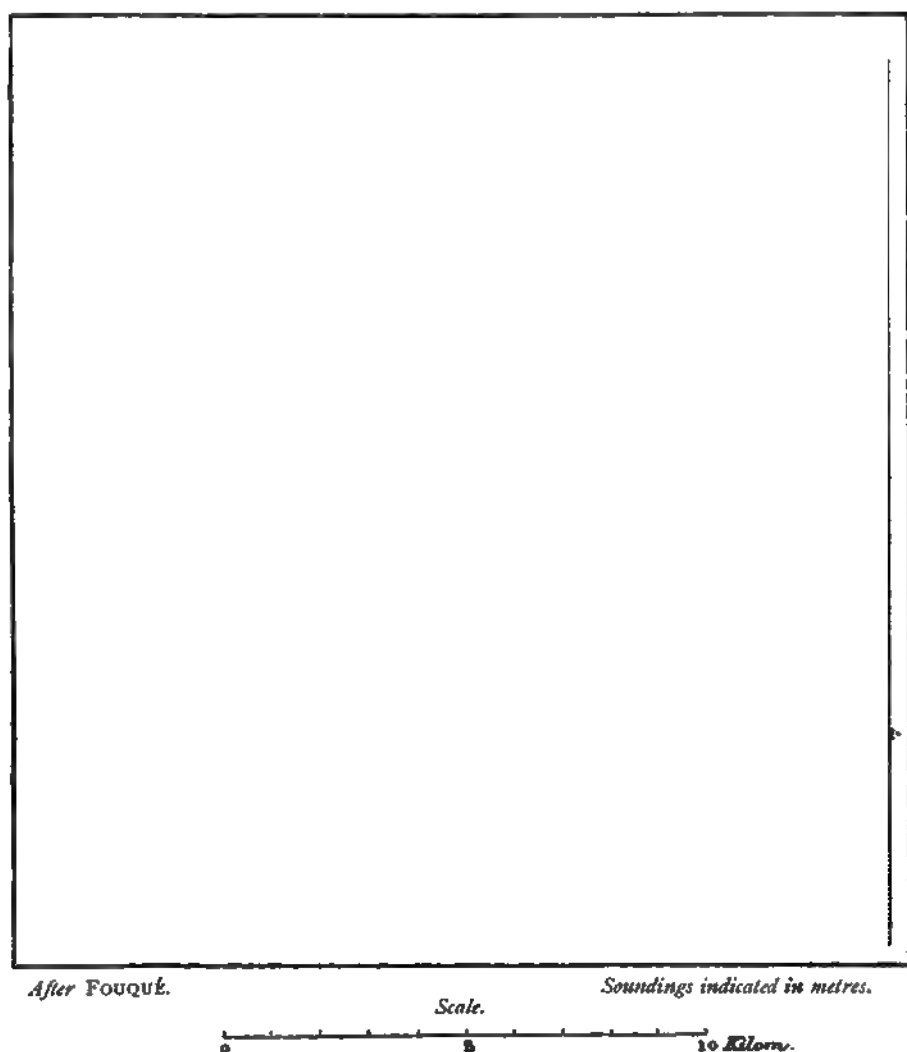


FIG. 28.—Map of Santorin.

in all the gifts of Liber and Demeter. Fresh eruptions added to the size of the island throughout the quaternary period, when man made his appearance; then came the catastrophe whose phases the man of science reconstructs with as much certainty

as if he had been an eye-witness of that stupendous drama. The culminating point of the dome-like mass of the island rested upon a subterraneous cleft, into which it suddenly sank, leaving in its place a vacuum comparable in extent to the circuit-wall of Paris. To-day Thera, Therasia, and Aspronisi represent the outer rim of the old island. When the central mass fell in, it carried along with it a great piece of the northern coast; through the yawning chasm the sea now rushed in with indescribable force, and tore away what still remained of the thin rampart on the west side. After this terrible eruption, the inward fire entered one of those periodical rests common to all volcanoes, and the shrunk island was peopled afresh. Herodotus, who often speaks of Thera, knows of no disaster concerning it. The eruption of 193 B.C., which threw up an island, the first of the small archipelago of Kaimenis, "burnt islands," between Thera and Therasia, is the first intimation we have of such an occurrence among ancient writers. Another upheaval occurred in 726 A.D., during which volcanic substances are said to have been transported by the wind to the coasts of Asia Minor and Macedonia. From 1570 A.D. no century went by without a fiery outburst, but which nobody seemed to heed, and which did little or no damage, until the memorable eruption of 1866, which raged on with unabated violence for more than a twelve month, and was the first to be observed and described by thoroughly competent witnesses, amongst whom M. Fouqué easily comes first. The explosions may be said to have extended to 1870; the sea around was heated almost to boiling-point; even now the whitening smoke of fumaroles on the sides of the largest Kaimeni, whose cone rose to nearly 120 metres, testifies that life is not spent below. Had any such phenomenon taken place centuries before Herodotus, in the days of the Doric emigration in the Archipelago, some faint echo would have reached us at least, in the mythical form of a Chimæra or an Enceladus buried under another Etna. Curiously enough however, historians, poets, and geographers are equally silent respecting Thera and its local traditions.¹

According to the authority of Herodotus, when the Spartan colony led by Theras reached the island, towards the twelfth century before our era, they found implanted there a Phœnician

¹ PINDAR, *Pythics*; STRABO; PAUSANIAS.

settlement of some two hundred and fifty years' standing.¹ On the other hand, a hundred years at least must be allowed before the island returned to its normal state, and was again fit for human habitation ; perhaps even a longer time was necessary to assuage the fears of men against the recurrence of another such disaster. Our answer to the objection as to the unlikelihood that so momentous a catastrophe should have been clean wiped out of men's memory, is that the Archipelago was then very sparsely populated, that communications between the different islands had scarcely commenced, and that Thera lies far away to the south, the farthest from the group of the Cyclades.

Geologists and scholars alike arrive independently at the same conclusion, and place the disaster which gave birth to the Bay of Santorin about 2000 B.C.² This eruption, as we said above, occurred a hundred, perhaps hundreds of years before Sidonian mariners began to ply their boats in the Archipelago, distributing among its islands the products of Egypto-Chaldæan industry. Evidences, whether historical, archæological, or literary, establish the fact that the Phœnicians obtained seats at Thera which they long retained. Hence one is almost tempted to assume that towards the end of the eruption they were the first to get a foothold in the long-deserted island. Rumour of the disaster was not likely to have reached their fathers, then still dwelling in the far-off islands of the Persian Gulf, or at any rate hardly venturing away from the Syrian coasts. No disagreeable recollection kept them off from waters so admirably fenced in, and which they visited for the first time. Was the land empty ? —all the better for them, since they would not have to fight for seats or fear competition. That the spot was a desirable one for implanting an important factory, and stores to supply markets presently to be opened all over the Cyclades, was palpably evident. The theory that the Phœnicians were sole occupiers of the island until the arrival of the colony from Sparta has this in its favour, that it will explain why all remembrance of the old

¹ HERODOTUS.

² Observations made in the regions of the strait of the Sound, which the eruption of the Krakatau in 1883 covered with ashes and pumice, allow us to form a notion of the time required for the modification of surfaces lying deep under volcanic substances and their fitness for human abode. In this estimate allowance should be made for different localities. In the equatorial zone, rains are much more abundant and heat is far more intense than at Thera.

catastrophe was forgotten; in that the Phœnicians landed on its coasts so long after the event that they could not be expected to know aught about it, nor was there a Greek population able to inform them, or hand down the tale in history or poetry. True, with Dorian colonists the island became once more Greek; but Peloponnesus lay too far off for rumour to have reached it of what had happened at Thera four or five hundred years before. The thread of local tradition had been too long in abeyance to permit of its being taken up again.

Accordingly the ancients had no inkling of the drama which Nature had enacted in by-gone days on this scene. Its inhabitants throughout the classic period had no reason to suspect that beneath their houses lay others buried in cinders and scorïæ. What they failed to detect was easily made out by modern observers. Inspection of the vertical beds to be descried on the ridge enabled them to determine the extent of the primitive soil, ere it was disturbed by the great eruption. This demarcation line appears throughout at about the same height above sea-level, and is plainly indicated by a thin layer of vegetable earth, resulting from the decomposition of old lava, which intervenes between it and masses of pumice stone cast up by the volcano ere it sank into the abyss. It is below this stratum of scorïæ that proofs have come to light of houses having stood here, when Thera was for the most part submerged.

The discovery was due to chance. Whilst the Suez Canal was being constructed at Port Said, the officials of the Company were in the habit of sending for puzzolana stone, which their servants quarried in the islands of Thera and Therasia. Now, towards the lower part of the pumice bed they invariably came upon huge stone blocks difficult of removal, and which practically impeded further progress. The quarrymen were fully aware that the stoppage was caused by old structures; ruins however are so plentifully distributed all over the island, that nobody thought of inquiring into the age of these particular ones. Fortunately for us, M. Christomanos, professor of chemistry at Athens, happened to be at Thera for the purpose of testing on the spot eruptive phenomena. He at once recognized the real character of these structures, and pronounced them to be older than the formation of the tufa bed.

Before giving in our adhesion to his opinion, it will be well

to ask whether the ruins in question may not be explained away differently ; as tombs, for example, scooped out of the base of the tufaceous stratum, where the stone was laid bare and cut into vertical beds by the last convulsion ? We need not go out of Thera for specimens of tombs so situated, but which date from the Hellenic period. For argument's sake we will suppose that we are not confronted by subterraneous chambers, but real houses erected in the open ; even so may not the tufa which covers them have been rehandled, or be due to seismic and other disturbances which would have produced a sudden sinking of the mass and buried the dwellings built at the foot of the escarp ? This has

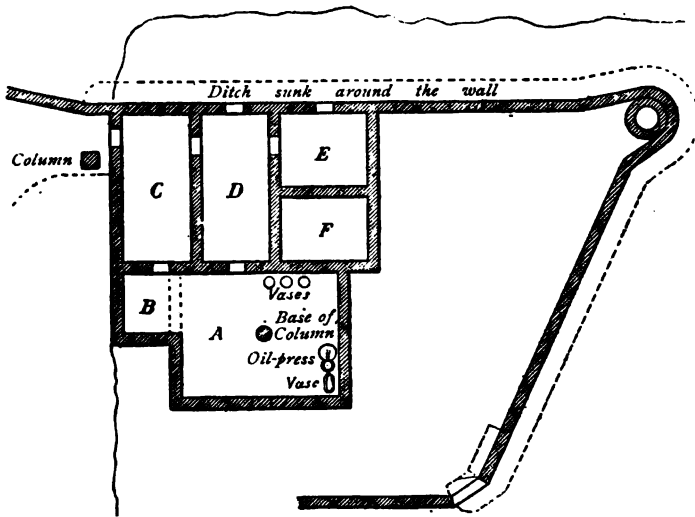


FIG. 29.—Prehistoric house at Therasia.

actually happened to modern houses situated near the railway station of Phira, now lying half buried and fated to disappear altogether.

These and similar objections have been completely refuted by excavations commenced in 1866, at the foot of the rocky ridge to the south of Therasia, by two native gentlemen, Alafousos and Nomicos, and terminated in the following year by MM. von Hahn and Fouqué.

The building uncovered by these excavations consists of six chambers of varying size (Fig. 29) ; the largest (A), to the south, is six metres long and five broad, with a recess (B) two metres fifty centimetres at the side. A cross-wall parts it from the rest of the building. Over this wall, from west to east, are two

chambers (1) (C, D), six metres by two metres fifty centimetres ; (2) the next section is subdivided by a partition-wall into two smaller chambers (E, F). On clearing these apartments, they traced the circuit-wall, which on the north formed the outer wall of the building, eight metres long. The only means of egress was on the south-west, where the rampart sweeps round and suddenly breaks off to within eighteen metres of the north corner. At the north-east angle of this fortification is a circular block of masonry (G), raised one metre above the ground. The chambers having been cleared of the accumulated earth, they next dug a deep ditch in front of the north face of the erection and the wall stretching out beyond it, when they discovered that the foundations rested directly on the old lava, which the builder had easily reached through the thin bed of vegetable earth which here formed the soil, ere pumice began to accumulate over it. The pumice stratum spread everywhere ; it filled the chambers, and was heaped up high outside the building. On removing it from the massive circuit-wall, they uncovered a skylight in each of the chambers C, D, E, and a larger window about one yard from the floor.¹ A number of huge vases, differently shaped and ornamented, were discovered full of grain ; the largest of these are one hundred litres in capacity. Barley and other cereals were also found piled up in the middle of the chambers or along the foot of the partition-walls. Then too, lying about, were troughs, grindstones, weights of lava, and other lithic instruments, besides a saw, also of stone, and an arrow-head of obsidian (tail-piece, chap. ii.) ; whilst from chamber A, near the entrance to recess B, comes a human skeleton, which did not impress the excavators as having been laid reverently by friendly hands in its last abode, but that, as at Pompeii, it had been crushed with the falling in of the roof. Given the circumstances of the case, we cannot be surprised to find a skeleton among the ruins of a village buried under masses of eruptive matter. Had the inhabitants timely warning of the impending danger, and was the vast majority able to make good its escape ? Who shall say ? An answer to this question could only be given by sounding the depths of the abyss which separates Thera from Therasia, or at any rate by raising the thick sheet of ashes and lava which overlays such portions of the island as have been spared by the volcano. Yet,

¹ These windows are sixty centimetres by fifty centimetres.

even had the inhabitants been provided with a sufficient number of boats to enable them to rush from the scene of the disaster, there must have been, as in Campania, many a wavering individual, many a loiterer, who perished because unable to make up his mind in time. From the fact that these dwellings have been found in a disordered condition, it has been conjectured that the eruption occurred immediately after the harvest, before time was had to stow the grain away. In the tombs of Egypt and other countries have been found vases and food, but their arrangement leaves scarcely any doubt as to their funereal purpose. Nothing of the sort is seen here. Pottery and cereals are scattered everywhere; on the floor of chambers, in courtyards, and above all in small apartments which seem to have been places for the storage of provisions. Besides, whoever heard of tombs with wood ceilings, and windows almost pierced on the ground plane, doomed beforehand to rapid destruction, and largely exposed to prying eyes? Has not every nation, with due regard for its graves, always striven to conceal the body in a dwelling which carried with it the air of having been erected for all ages; either in a rocky side, or behind blind massive walls, vaults within which no indiscreet eye should penetrate to disturb the dead? It is self-evident therefore that the erection exhumed by M. Fouqué was a human abode, built before the emission of the pumice. The bays in the main apartments open on the hill. This would be a remarkable situation had the structure, as at first surmised, been raised long after the eruption on a ledge thrown out towards the foot of a lofty tufaceous wall, which had fallen from above, between the bluff and the sea; surely in that case we should find the windows towards the latter, and not so close to the rocky ridge as to have no outlook on this side. Then, too, we may assume that the pumice stones which fill the chambers, and under whose weight the roof gave in, were not rolled there by the waters, since their edges are as sharp as on the day of their fall. This also applies to the pumice heaped up in the immediate vicinity of the building, where the stratifications are mainly horizontal, or at most present a slight incline answering to the slope of the ground whereon are deposited the volcanic ejections. These stratifications, which the eye can follow along the cliff in a long unbroken line above the construction, show that the pumice mass was formed by

a single eruption, which may have lasted some time, but without notable break. A last observation will remove any lurking doubt. Arguing from the fact that at the present day Thera has no potter's clay, and that it imports its earthenware from Milo and Anaphos, the multitudinous vases found within and without the prehistoric houses of Thera were at the outset held to have been brought to the island by way of trade. In order to be quite sure as to the origin of this pottery, MM. Fouqué and de Cessac examined some fine slips of it under the microscope, and they discovered that the clay could have been supplied by the soil of Thera alone; whilst the absence of anorthite lava further showed that the material was not derived from the north of the island, where this kind of felspar abounds, but from the south, near to the sea and fresh water, evidenced by the presence of diatoma, foramina, spongilla fluvialis, etc., in the clay of the vases; that is to say animals, some of which live in salt and others in fresh water. No place answering to these conditions now exists; but we learn from geology that a deep valley, before the great eruption, was inserted between the central cone and a hill fencing it in on the south. This valley came up close to the islet of Aspronisi, and from the deposit formed at the mouth of a stream which flowed at the bottom of the valley came the clay of our vases.¹ It follows therefore that they were made at Thera itself before the catastrophe.

Moreover the excavations have proved that the structural block described above did not stand alone, but that veritable hamlets rose on several points of the island, suggesting a thick population. Thus, the dwelling of which we give a plan contained apartments other than those that have been unearthed.

Connected with the northern wall was a second and lower one, stretching towards the west below the tufa, and bounding a great vaulted chamber, which was only partially emptied, to guard against a sudden collapse of the walls enclosing it. Here too, on the same level, they traced other walls; whilst a smaller erection consisting of a single room, and the beginning of a wall which presently disappears under the cliff, were uncovered at about twenty-four metres from the north-east corner of the enclosure.

It was not only at Therasia that this population left traces of its activity; we also find unequivocal marks of their activity

¹ FOUQUÉ, *Santorin*.

near Acrotiri, to the south of the island of Thera, where in 1867 M. Fouqué lighted upon walls just visible above the crest of rubbish resulting from the disintegration of the rock, and a landslide which has been precipitated at the bottom of the ravine, along with a great quantity of fragmentary earthenware, akin to the Therasia pottery, implements of obsidian, knives and arrow-heads, including two small gold rings which must have formed part of a necklet.¹ On these same sites also, notably towards the brink of the ridge, to the north-westward of Acrotiri, MM.

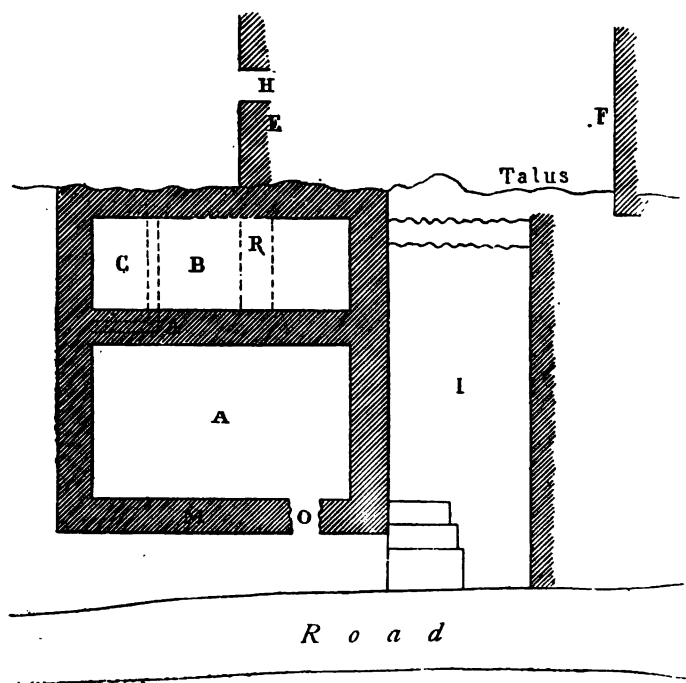


FIG. 30.—House at Thera.

Mamet and Gorceix, of the French School at Athens, subsequently brought to light remains of several houses. Of these it will suffice to reproduce the plan of what appears to have been the most important in the place (Fig. 30). Its walls, inside, had been overlaid with a clayey mortar, whitewashed and painted with many colours. Neither vases nor stone instruments offer any variety from those already described; except that alongside of two knife-flakes of obsidian was found a saw made of pure copper, with no trace of tin. This tool, whose point is broken, is the only

¹ Broken vases here formed a bed of potsherds thirty centimetres deep.

specimen of metal which these ruins have disclosed;¹ one of its ends is pointed, to facilitate insertion in the wooden handle (Fig. 31). Despite the poor state of the teeth and its greenish colour, which is due to carbonate of copper, it is still sharp enough to cut soft wood, such as pine and poplar.

M. Gorceix, basing his conclusions on the fact that the pumice filling the apartment where lay the copper instrument was undisturbed, and that the stratifications when visible along the cliff are manifestly regular and horizontal,—which could scarcely be the case had there been a partial subsidence, that would have buried the houses and carried the tool below,—rules it to be contemporaneous with the houses. Mixed with a thick bed of straw, strewing the floor of the apartment wherein the saw under notice was discovered, were countless goat or sheep bones, and earthen bowls which contained barley. The excavators found on other spots bones of the same nature, showing that the men who

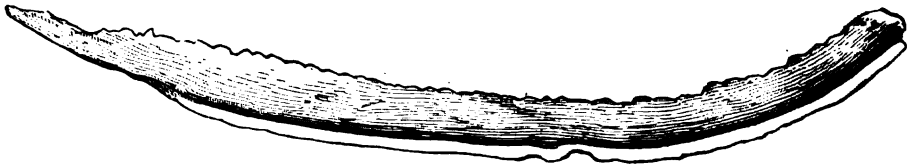


FIG. 31.—Copper saw, after Gorceix. Length 22 cent. by 5.

inhabited these villages had domestic animals, whilst the disks with central holes referred to above indicate no less clearly that the fish which abound in these waters were caught with nets which the whorls in question weighted and kept stretched (Fig. 32). From the variety of grains contained in huge vases, such as lentils, aniseed, coriander, and a kind of pea known at the present day in the island of Thera as "arakas," and barley above all, we may conjecture that husbandry had made considerable advance. Nor was tree culture unknown; at least there is evidence that the hilly slopes were already shaded with the graceful foliage of the olive; for amidst these ruins have been found branches and stems of this tree, some of which still preserve their bark. Did they know how to graft it, and press out the oil from its fruits? To this query we have no very clear answer to give. But we might be tempted to think they did,

¹ For a circumstantial account of the question, the reader is referred to GORCEIX, *Bulletin de l'École française d'Athènes*, 1870).

from a large vase of lava uncovered by M. Fouqué in chamber A. It is provided with a cone-like internal cavity forty centimetres in diameter and thirty centimetres deep, exhibiting a hole at the bottom which communicated with the outside by a small runlet, opening above a small trough evidently meant to receive the liquid flowing from the upper vase. The inner wall of this recipient is much worn by friction. When held up to the local folk they at once exclaimed that an oil-mill had been brought to light, resembling those which are still in use all over the island. They served to grind corn, and mayhap olives also. These buildings exhibit a very peculiar mode of construction. The walls are made of blocks of lava, set up irregularly and haphazard, the one upon the other; but they are cut and arranged in horizontal beds at the corners of the exterior wall of the house, and laid in a clayey, reddish substance mixed with vegetable

FIG. 32.—Lava weights.

matter (Fig. 29). Between the stones are long pieces of olive wood, of varying size; easily recognizable notwithstanding their advanced state of decomposition. Every door and window had wooden frames; but they have been crushed out of all semblance by the downward pressure of the pumice. The difficulty of identifying them therefore is very great; still, in some instances it has been possible to determine their situation. Difference of level between the rooms was made good by two or three steps. The roof consisted of a bed of earth some thirty centimetres deep, kept in place by multitudinous beams. The larger apartments show a more complicated arrangement. Thus, in the centre of the main chamber A (Fig. 29) was found a circular block, dressed fair, the upper face of which is plain and *cir.* thirty centimetres in diameter. We doubtless have here the base of an unsquared timber column. The cross-beams inserted in the walls of this chamber had a uniform upward incline towards

the centre; they still maintained their original situation, for it will be remembered that the pumice filling the room was untouched. This fact enables us to affirm the existence of a central support, towards which converged these small beams.

The inner walls of most houses had no better facing than the same coarse plaster which unites the blocks of masonry; examples of walls whitewashed and ornamented with successive bands of diverse colours, flowers and other ornaments, akin to the decoration of the vases, are not very uncommon. Strewing the floor of one of these chambers were a number of coloured plaster fragments, which, according to M. Gorceix, could only have fallen from the ceiling. One house seems to have had two storeys; for about the walls of chamber c (Fig. 29) were still pieces of wood which must have constituted the ceilings.¹ Elsewhere the explorers noticed a large enclosure which had been made watertight by having the stone flags of its floor well fitted together, and its walls overlaid with a thick coating of lime. That it was some kind of cistern for collecting rain-water is pretty clear. Further on they found, leaning against the main apartments, smaller ones, sometimes half sunk in the ground, to which reference has already been made, as places for storing provisions. Stables also seem to have been recognized. The house of this period, then, was already far removed from the hut which the savage is obliged to share with animals and the little stock of provisions which he has set in reserve for himself; but all of which take up a space he can ill spare. It had dependencies or special apartments for the different purposes of life; and that its living-rooms were bolted and made secure against rude and unwelcome intrusion from without, is proved by holes found in the wall at either side of the entrance, clearly meant to receive wooden bars. Hence the family could carry on existence after its own fancy and pleasure, and indulge in a certain degree of elegance.

These excavations have unearthed a rich ceramic store, which will find due recognition in the chapter we shall devote to pottery. For the present we may state in a general way that the clay employed in its fabrication was not carefully sifted and purified, for it contains large proportions of crystals, fragments of lava, and other non-plastic elements. The surface has been more or

¹ Fouqué, *Santorin*.

less smoothed over with the polisher. All these vases are imperfectly baked, save a few specimens which are quite plain, and burnt to a vivid red. Curiously enough, it is in the better class of vases where we detect particles of marble, which would have disappeared had they been subjected to high temperature. Indeed so slight was the baking, as to have led M. Fouqué to suspect that the pieces had never been placed in the furnace.¹ However hot may be a Grecian summer, we very much doubt its potency to harden clay enough to make it serviceable for utilitarian purposes, as these vases undoubtedly were. All seem to have been used, but none show traces of having gone on the fire. The vessels are uniformly covered with an engobe, either applied with the brush or by dipping the vessel into a coloured bath. This is conjectured from the fact that the ground-colour extends now to the interior of the vase, now is confined to the inside of the spout; which would not be the case had there been immersion. Among the pieces found almost intact, or which have been pieced together, are huge jars analogous to the *πίθοι* found in such profusion at Hissarlik, pots with rounded, protuberant sides, pitchers, flagons, goblets, cups, plates, amphoræ,—a whole host in fact.

We feel that the potter not only varied his shapes so as to appropriate them to different uses, but that he was at pains to please the eye with a good outline, enlivening the whole with colour, and the subtle charm and grace of proportion. Generally the colours are brown, black, maroon, white, and red. As a rule there is a band round the neck and where the handles are joined on to the body; the ornament is purely geometrical: hatchings, stripes, broken lines, tears, and dots fill up the fields. A more complicated scheme shows interlaced rings, spirals, and undulating lines, seemingly in imitation of waves. Side by side with floriated designs we also find attempts to suggest birds and quadrupeds, but to what species they belong is not made clear.² The civilization which obtained at Thera before the eruption which cut short its further progress, was in some measure advanced. It was still of an elementary nature, in that it demanded of stone the material for its weapons; but the gold rings and saw made of copper prove that it had

¹ FOUQUÉ, *Santorin*.

² A. DUMONT, *Les céramiques de la Grèce propre*.

already entered into relation with the stranger. There is no trace of metallic ore nor of rocks of obsidian in the island of Thera. The stone then must have come from Milo, whilst gold was doubtless obtained from Asia Minor, and copper from Cyprus. That coasting trade throughout the Archipelago had assumed some importance, would appear from the following fact: M. Gorceix picked up in many of these houses smooth pebbles of varying size; and from the situation which they occupied in respect to the furniture of the house, he was led to infer that they were weights, multiples of a single unit whose fractions are represented by smaller balls found alongside of the larger ones.¹ The relation they bear the one to the other is very simple and easily made out; and though discrepancies occur between the figures required by the formula and those we obtain by testing the weights great and small, they are no more than we should expect to find in a primitive state of society, and hardly more than what actually exists in practice at the present day where weights and measures are not controlled and tested by the authorities. Consequently these irregularities ought not to prevent our acceptance of a rude attempt made by these populations to feel their way to a system of weights and measures which were calculated to greatly facilitate commercial transactions. Better than aught else, these pebbles show that sixteen or seventeen centuries B.C. rude barbarism had long disappeared from the Ægean. That the nation whose work has been brought to the world's notice in this species of prehistoric Pompeii had artistic aptitudes, is made manifest by the decoration of its dwellings and pottery. It is then no exaggeration to say that "this ceramic industry reveals a mind already on the alert, inquisitive, on the track to new inventions, and most assuredly happily endowed."²

Troy.

If in this study of Mycenaean civilization our first station was at Thera, in order that we might survey its houses buried under volcanic ashes, it was with no intention of claiming

¹ FOUQUÉ, *Santorin*.

² A. DUMONT, *Les céramiques de la Grèce propre*.

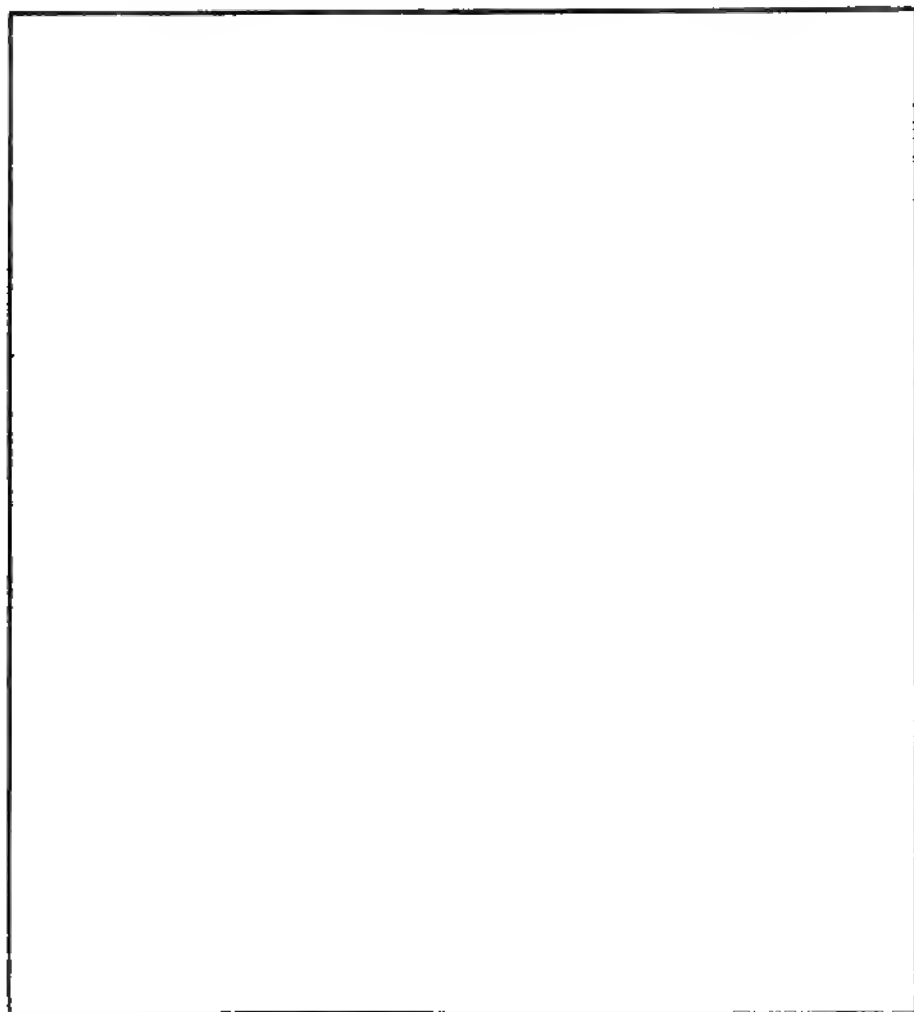
for these dwellings and the products of human industry which they enclose, so hoary an antiquity as would practically make them older than any other monument which may fairly be placed in the prehistoric age of Hellas; but because Thera supplies data which permit us to state, with reasonable probability, that *circa* the seventeenth, or at the latest the sixteenth century B.C., its population was sufficiently advanced to carry on a commercial intercourse with its neighbours far and near; and that above all it perished by Plutonic agency.

To have reached this relative degree of culture implies a respectable antiquity, which it is in the last degree improbable it should have been alone to possess. Hence we may expect to find in the Ægean other points where excavations will enable us to reach a period older than that within which we intend to confine ourselves in this history, so as to handle it in as complete a manner as possible. And if there is a spot more than any other where this hope has a chance of being realized, that spot will be found on the hill of Hissarlik.

The stretch of ground which the ancients called the "Trojan plain" occupies the north-west corner of Asia Minor, on the lower course of the Scamander, known at the present day under the name of Mendere-su (Fig. 33).¹ It enters the Hellespont close to Cape Sigeum, opposite the extremity of Thracian Chersonesus, to the west of the bay fenced in by two promontories of no great elevation, anciently called Cape Sigeum and Rhæteum, which mighty Ida sends out from its double range of heights. Measured in a straight line, the space intervening between these two points—which is the valley itself—is about 5,500 kilometres. At a short distance from the shore, the coasts on either side suddenly contract and rise almost sheer from the plain, leaving but a narrow gorge for the river to flow through. This plain is bounded by two streams; but owing to its very slight incline the waters are not drained off, but meander in and out of reed-brakes, where they stagnate and turn the low ground into a vast morass. The land, to a large extent, has been reclaimed by cultivation and drainage. In 1890 I found an enormous improvement in this direction since my first visit there some thirty years before. In order to thoroughly drain and clean it, however, both the Scamander and its two affluents, the Dumbrek

¹ *Su*, a Turkish word meaning "water."—TRANS.

(the Homeric Simoïs) and the Kemar (ancient Thymbros) would have to be embanked so as to prevent their overflow. Their direction is from east to west. The Bunarbashi rivulet flows to the sea through a channel or tunnel cut right through the rocky ridge which skirts the Ægean to the westward. The



after SCHLIEMANN.

FIG. 33.—Map of Troy.

current of the Scamander sinuates through the middle of the plain, dividing it into two equal sections or thereabouts, east and west. As a rule the river can be crossed at almost any point; but after heavy rains, or when the snows on Mount Ida begin to melt, it rises and overflows its banks, and part

of its volume falls into its ancient bed, which now is almost always dry, reaching the Hellespont by four mouths or estuaries, more or less choked up, of which the most important are the Kalifatli-Asmak and In-Tepeh-Asmak. Overlooking the old bed of the Scamander, some five kilometres from the sea-shore, rises the now famous hill, which, on account of its abrupt sides and of the walls which formerly crowned its top, the Turks call Hissarlik, "small fortress." The mound is a kind of spur which the heights parting the Kemar from the Dumbrek project into the plain. The rise of the Dumbrek is considerably north of that of the Scamander; it runs parallel to it for some distance, and only joins it at its mouth. The summit of the mound, fifty metres above the sea, is probably a little more than



FIG. 34.—View of Hissarlik from the north-west.

when the first settlers established themselves on it, *i.e.* before successive erections had raised it to its present elevation. The side turned to the plain doubtless rose precipitously, or at the least was difficult to scale. Since then sherds and fallen earth have entirely covered the rock which forms the core of the hill, and trenches without number have furrowed its flanks. Nevertheless some notion of its original shape may be gained from our engraving (Fig. 34).¹ Its happy situation was calculated to com-

¹ I embrace this opportunity of acknowledging my debt of gratitude to M. Durm, the leading Government architect and teacher at the High Technical School of Karlsruhe, with whom I spent some very pleasant days at Hissarlik, in May 1890. He kindly allowed me to reproduce several of his sketches which he had made on the spot.

mend itself to early settlers. Its defensive position was first-class, and was further strengthened by two rivers that covered its front, enclosing it as they did within the angle of their confluence. It offered moreover an excellent post of observation. From it the eye can take in the whole plain, right away to the broad entrance of the Hellespont, on to the European coast and the elongated mass of Imbros, above which rises the lofty pyramid of distant Samothrace, which fences it in at the horizon (Fig. 35). The distance from the sea was just enough to secure its inhabitants from the night attacks of traders, who easily became pirates; near enough to enable them to steal quietly down to the shore where the boat was moored, and push out to sea.

Even though knowing nothing of the past history of this district, we should nevertheless be inclined to seek here rather than anywhere else the site of a very early fortress, in that it rules at once a fertile plain and the approaches to the strait; whilst it rejoiced in an unfailing supply of water. The advantages offered in this respect by the fortress-hill would be vainly sought among the heights bounding in the plain to the westward: two rivers wash its foot, and a fountain rises on its slope. Its course was traced for some distance by Schliemann a few years ago, by following a channel which was cut inside the wall of limestone for the purpose of collecting every thread of water trickling through the clefts of the rock; above it grew a fine fig tree reverently spared by the explorer. At a depth of thirty-six metres or thereabouts from the external orifice, the gallery divides itself into three diverging channels, which carry their waters to reservoirs that have been frequently rebuilt (Fig. 36). As soon as the subterraneous conduits were cleared, the spring again ran out clear and fresh. It was the water from this spring which was placed on Schliemann's table, and which along with other guests I drank in 1890. Starting without preconceived ideas, but solely guided by history and the indications which crop up at almost every point of the ground, the explorer was likely to be led by the hand, as it were, to the hill of Hissarlik. Besides Scylax, who says that the town of Ilium¹ is twenty-five stadia from the sea (4,625 metres), we have other evidences, too numerous for quotation, which all tend to prove that from Xerxes, 480 B.C., down to the Emperor Julian, 363 A.D., the town claimed to

¹ SCYLAX.

FIG. 35.—View of Hissarlik, looking westward.

be the continuator and inheritor of Homeric Troy.¹ These twenty-five stadia of the old geographer harmonize with the figures set down in the map of Hissarlik as to its distance from the nearest point of the sea. Could however any doubt be felt respecting the identification of the site under notice, it would be amply met by the inscriptions found on the hill itself and the adjacent villages, wherein the name of the Ilian people occurs again and again.² If many of these inscribed slabs are



FIG. 36.—Fountain to the south-east of the citadel.

scattered in the immediate neighbourhood, it is because the inhabitants have used the mound as a marble quarry for the purpose of adorning their burial-grounds. What other centre

¹ The texts bearing on the question may be read in SCHLIEMANN'S *Ilios*.

² *Corpus inscrip. Græc.* Most of these inscriptions were collected in the cemeteries of the Troad, notably at Tshiblak, its most important village; but several epigraphic texts of great historical value were unearthed on the mound of Hissarlik itself. They record town decrees, donations made to its inhabitants, etc. (*Ilios*). Schliemann also brought a great number of autonomous and imperial coins, silver, copper, and bronze, which form part of his collection.

outside Ilium could show such an array of ancient remains as were visible at Hissarlik before Schliemann excavated the site, and which every traveller has duly chronicled, and informed us that they still numbered a theatre, turned to the Dumbrek valley, with steps cut in the rock, shafts of columns, capitals, and blocks of every size and description?

If the question respecting the true site of "Troy divine" could not be settled on the mere assertion of the Ilians, the hypothesis which on the first blush looks most likely is that which conceived the Græco-Roman Ilium as having stood on the ruins of the city stormed and burnt to the ground by the companions of Achilles. The fact that the ancients persistently adhered to this tradition is a strong presumption in favour of identity of name and position. The problem which had been deemed impossible by learned Europe has been solved by the energy and skill of Schliemann, urged thereto by his wish to re-discover Troy. The narrative of how his love for classic lore awoke in him is instinct with simple and unaffected pathos. Owing to the hard necessities of life, he was unable to satisfy his passionate longing until well past middle life; and we may regret that lack of what is called liberal education should have deprived his judgment of critical insight.¹ At forty-six he had realized a fortune large enough, not only to place him above want, but in very easy circumstances. Being now free to indulge his old love, he lost no time in setting out to look for the walls of Troy on the Bali Dagħ, on whose slope nestles the village of Bunarbashi, which his fervid fancy pictured as hardly damaged by the victorious Greeks or the hand of time; for here, since the beginning of the century—on the untrustworthy authority of Lechevalier—the learned world, almost to a man, had agreed to place the site of ancient Troy.² On the Bali Dagħ, however, he found nothing which in any way would harmonize with his notion of what the ruins should be like, and in 1875 he decided to sound the flanks of Hissarlik. On this spot he conducted no less than eight campaigns, each of several months' duration, stretched over a space of nineteen years (1871-1890). He spent large sums of money, and brought to the undertaking a patient energy unsurpassed by any explorer

¹ SCHLIEMANN, *Ilios, Autobiography of the Author*.

² LECHEVALIER, *Voyage dans la Troade*.

past or present. He deserves all the more our thanks that he did not expect to discover important monuments of the class unearthed at Olympia, or such as we hope to bring out at Delphi. Schliemann's exuberant enthusiasm, sometimes so naïvely expressed as to bring an involuntary smile to the lips, could alone have carried him through his arduous and self-imposed task; but the splendid results which he thus obtained should silence stupid raillery and elicit nothing but sincere gratitude. Commenced with dash and inexperience, these excavations acquired fresh interest from 1882 onward, when Schliemann was fortunate enough to secure the services of Dr. Dörpfeld of Berlin, an experienced architect who had for years managed the technical part of the German excavations at Olympia, whose judgment therefore on architectural subjects is entitled to the greatest consideration. Our exposition therefore of the main results of Schliemann's excavations, which he was about to resume when struck by death, Dec. 26, 1890, is solely based on Dr. Dörpfeld's plans and tracings.

The excavations have proved that the slight depression intervening between Hissarlik and the long ridge which stretches away to the rear was formerly much deeper, *e.g.* before masses of rubbish had been heaped up to the height of ten or twelve metres and almost filled it. The terminal cone was then completely isolated; it rose stiffly above the two valleys which meet at its base, whilst a broad ditch parted it from the mountain range. On this eminence Schliemann concentrated his main efforts, and here his most important discoveries were made. Later on he intended, and did in fact explore the adjacent plateau covering the ruins of the Græco-Roman town, near which lie two large Turkish hamlets of different date, Tshiblak, and the now famous Hissarlik; the latter was founded by Bulgarian emigrants professing the religion of Islam, who, having obtained a grant of land from the government, settled here.

From the second year onward, no less than one hundred and fifty labourers were digging away under Dr. and Mdme. Schliemann's supervision. Nothing was neglected to assure the success of the enterprise; a whole array of machinery and implements of English make had been provided, and two short lines of railways were made on which were placed hand-wagons, for the purpose of removing the rubbish from the bottom of

the trenches and shooting it out on the slope. Schliemann did not live to see the completion of his work, which has now been accomplished by his widow under the direction of Dr. Dörpfeld. At a depth of from forty-three to forty-five feet he discovered foundations of walls extending far beyond the former circuit, proving that the third establishment to which they belong was far more important than had been suspected.¹ The style of masonry they display entirely justifies the epithets used by Homer. This, then, would be the town seen and described by the poet. Even without this the data we before possessed were quite sufficient to enable us to determine the character and fix the relative date of the several erections, together with the products of human industry which the spade has brought to light in prodigious quantities, and which now fill two large rooms of the Ethnographic Museum at Berlin.² Schliemann began to excavate from the top of the mound, levelled out into a small irregular platform, with main direction from east to west. Sitting under the grateful shade of a fine oak, the sole relic of a thick clump of similar trees that formerly crowned the top of the mound, the eye travels over the plain, the sea, and the far-off mountain range, to rest it presently on the gaping trenches at one's feet, where the work is being prosecuted (Fig. 37). It is Schliemann's trenches which have changed the mound into the strange shape which it presents to-day.

The first strokes of the spades brought out sculptures, inscriptions, and remains of buildings of Novum Ilium, with foundations of limestone, whilst the apparent parts were of marble. Standing out from amidst these erections, was a temple of Ilian Athene, a goddess who found great favour with the Greeks of the Macedonian and of Roman times. Below this they came upon a perfect network of walls, bisecting one another in every

¹ The above passage is corrected and amplified from later information.—TRANS.

² Our study of Troy, Tiryns, and Mycenæ is greatly facilitated by SCHUCHARDT'S book entitled, *Schliemann's Ausgrabungen in Troja, Tiryns, Mykenæ, Orchomenos, Ithaka, im Lichte der heutigen Wissenschaft dargestellt*. In it the main researches of both Schliemann and the explorers who continued his work in Argolis are summed up with much critical acumen. To express our acknowledgment in every instance is quite impossible, since it would involve citing him at every page.



FIG. 37.—View of excavations looking north-west.

direction, remains of houses more or less roughly built, fragments of prehistoric vases, weapons, and stone implements, heaped up in prodigious masses, forming beds that did not always retain their regular course, but sank into one another in a very perplexing sort of way. To have uncovered the walls along the whole line would have entailed removing the accumulated masses of sherds as they were uncovered one after another; but adoption of a system involving complete destruction of all the upper layers along with the buildings they enclosed, would not only have been a most serious undertaking but a very undesirable one, in that future explorers would for ever have been deprived of the means of comparison, always useful, nay, sometimes quite indispensable for a full comprehension of ulterior discoveries. Plans and tracings, however carefully made, wear a very different aspect on paper from the objects themselves as seen *in situ*. Besides, so slow a method would have ill suited Schliemann's sanguine temperament, eager to reach the mound's centre and extrude its secret therefrom. In 1872 he cut a trench *cir.* twelve metres broad, and reached the virgin rock sixteen metres from the summit. This enormous breach, with direction from north to south, is still extant; like a main thoroughfare, it traverses the hill from end to end, whence branch off minor streets, later trenches that run out at a higher level in narrower and shallower channels (Fig. 38; trench intervening between x and z).

In the accumulations of materials which he displaced, Schliemann at that time thought to recognize seven periods, answering to what he called seven superimposed cities buried within the artificial mound.¹ These arbitrary subdivisions were not corroborated by later researches carried on by trained archæologists and architects. In their opinion the strata, which on account of the character of the objects found in them admit of being singled out, are reducible to four. Resting on the rock itself is the earliest or first settlement, and over it what Schliemann

¹ Schliemann's writings published before 1880, except that they enable us to trace the modification which his ideas underwent, have lost their interest for the general reader. They are moreover set at naught by his *Ilios*, in which he has set forth the conclusions to which he was led by his critics and his own excavations of 1882, when Dörpfeld was already with him. Hence in this book reference is made throughout to *Ilios*, whilst correcting and completing the evidence it affords with the help of the researches undertaken in 1889 and 1890.

terms the second city, to build which they first levelled out the surface into a kind of esplanade, and supported it by an embankment six metres deep, consisting like the platform of potsherds and imported earth. Not only is the mode of construction and the pottery found here entirely different from what we see in the first village, but they also exhibit considerable advance. That the existence of this little town was undisturbed for hundreds



FIG. 38.—Plan of citadel, showing the state of the excavations, July 1882.

of years, is proved by numerous alterations effected both in the walls, the city gates, and the erections within the enclosure. A time came, however, when it was overtaken by a terrible disaster in the form of a general conflagration. From that day until the Macedonian age, when it again assumed some importance, a few miserable huts, loosely and coarsely built, alone stood here. The admiration of Alexander for Homer is well known; he honoured

Ilium with a visit. Lysimachus went even further in his appreciation of the city, and built a temple to the local goddess, which he decorated with sculptures. The metope in fine style unearthed by Schliemann, which he presented to the Berlin Museum, belonged to this temple. He also surrounded the town with a wall forty stadia in circuit, and increased the population by adding to it the inhabitants of old neighbouring cities.¹ As soon as the Romans obtained a foothold in Asia,² they showered upon the town whence had gone forth Æneas, the mythical founder of Rome, substantial tokens of their regard. The power and dignity of the Ilians was further enhanced when the Julian family, claiming descent from Anchises and Aphrodite, assumed sovereign power. Cæsar confirmed their freedom, and exempted them from taxes and all public charges,³ adding to their domain the adjacent territories of Sigeum, Rhæteum, and Gergis. The town preserved its importance to the last day of the empire. Every stranger of note travelling in the Troad visited its principal temple, situate on the fortress-hill, and as a matter of course laid rich offerings before its shrine. The foundations of the circuit-wall which once enclosed the houses on the plateau have been traced to a considerable distance.

As a natural consequence of the erections, devastations, and reconstructions which went on for ages, the hill grew in height and spread to every point of the compass, so that each successive settlement has a larger area than the one immediately beneath. This peculiarity was brought about by the crumbling away of crude bricks that went to the making of the upper part of the enclosure, and along with the remains of decayed dwellings they slipped down the slopes and settled there, a small portion only of ruin and soil being carried by the large stones of the substructures into the plain; each one, however, increased the width and thickness of the mound. Hence it is that the space parting the north from the south wall is but forty-six metres; in the second or burnt city, this space rises to one hundred metres, and so on to the top. The masses of soil and rubbish with which the hill surrounded itself after the fall of the second city, in time settled down sufficiently to become the foundations of the houses of what Schliemann calls the Lydian and Æolian period. These in their turn were destroyed, and a

¹ STRABO.² 191 B.C.³ STRABO.

new ring of earth was added to what already existed. To judge from the accumulation of ruin and potsherds that have gathered here, centuries must have elapsed ere the Greek city arose, with an area which far outstrips that of the previous settlements. Cæsar and Augustus, it was rumoured in Rome, at one time intended to transfer the seat of the empire to this town, then known as Novum Ilium.¹

For convenience' sake we have employed and shall continue to employ the terms of "first, second, and third" city, which Schliemann has made familiar, to designate the groups that succeeded one another on this spot. No possible harm can come of using the name, provided the reader fully understands the limitations of the same; for in no respect do the prehistoric settlements image forth our notions of what we mean by town. Let us take Dörpfeld's plan of the burnt city (Pl. I.), made after the excavations of 1890; by drawing two lines across it, one from right to left and the other from top to bottom, we shall find that their length is 108 and 115 metres respectively, and the space they enclose 12,425 square metres;² that is to say, considerably larger than that of the town in question, as any one can see for himself by following the length of line encircling the area. To take a comparison near home: the courtyard called Cour de L'Horloge, at the Louvre, measures 122 metres at the side; this is equivalent to 13,784 square metres, and far exceeds that of the village which Schliemann identifies with Homeric Troy.

Given the space of the latter, its population can never have been large, no matter how closely packed the houses may have been. Add as we will a few metres to the area of the third village, enlarge somewhat the surface of the last Greek settlement, which may almost be considered modern, all we shall obtain will be a space barely the size of our court, which is by no means one of the largest squares of the French capital. Accordingly, here, the value of the word "town" is purely conventional, "citadel" would have been more apt.

All we know of the first village is now visible at the bottom

¹ Suetonius, *Cæsar*; Horace, *Odes*.

² Two of the sides fall short of this figure by a few centimetres; the difference however is of too trifling a character to affect the argument, and therefore need not be considered.

of the main trench (Fig. 38, x, z). The rock uncovered at this level shows a gentle incline to the southward of about two metres. It is covered with a thin layer of vegetable earth, on which rest walls still protruding one metre or thereabouts above ground (Fig. 38, f, *fa*, *fb*, *fc*). Three of these walls (*fa*, *fb*, *fc*), on the north and south sides, are apparently fortifications. The inner wall (*fb*) probably dates from the first tribe settled on the hill; and it is self-evident that the exterior defence (*fa*) was enlarged and partly rebuilt. All consist of blocks of unsquared limestone, and all are two metres fifty centimetres thick; the lining slabs of these walls are larger than those forming the core, and slightly convex. Running between these stout fortifications, and almost parallel with them, are five walls, crossed at right angles by other two, averaging from sixty to ninety centimetres in thickness. All are built of rubble laid in mud. Though very primitive, the mode of construction exhibited here betrays a certain effort after effect. There is a marked tendency to almost horizontal beds; the stones are set up slantwise, but their incline is reversed from one course to another, so that the effect is roughly suggestive of the *opus spicatum*, or herring-bone pattern, of the Roman builder (Fig. 39). Adhering to these walls are still bits of a clay-coating. From the fact that the walls in question stand wide apart from one another, and the difficulty of spanning the spaces parting them, it has been vaguely inferred that they belonged to stables. But, as we have shown at Thera, and shall presently show at Tiryns and Mycenæ, where examples also exist, the ceiling could be supported by wooden pillars. Then, too, we have evidences that the downward thrust put upon these walls was lightened by transverse ones; for constructive reasons two only have left traces on the ground; this is well seen on plan (Fig. 38). Again, had their purpose been the sheltering of cattle, is it likely that we should find here stones artistically arranged and the walls' surface smoothed over with a clay coating? Apart from these considerations are others, which are strongly opposed to the hypothesis under discussion. In 1890, Schliemann, at Virchow's request, enlarged the bottom of the main trench to the southward. In the few square metres thus uncovered, they lighted upon jets of walls on the same level as the fortifications with which they are surrounded;

together with vessels of polished stone, heaps of kitchen refuse, shells and broken bones of domestic animals, notably goats, sheep, horned cattle, but curiously enough hogs were extremely rare. Of wild animals, bones of hares, fallow deer, and boar-tusks were found in large quantities.¹ From the animal matter collected here, Virchow rightly concluded that we are in presence of house-walls, and that the folk who inhabited them

FIG. 39.—Walls of first town.

were shepherds and fishermen; the chase was a pastime indulged in by the well-to-do alone.²

In 1890 the rock was also laid bare on the west side of the hill, but no architectural remains were found; hence it would appear that the primitive village, in this direction at least, did not extend much beyond the talus of the great trench under which it disappears.³ Here, at a depth of thirty metres

¹ So writes Virchow, to whom Perrot refers.—TRANS.

² VIRCHOW, *Reise nach Troas*.

³ SCHLIEMANN and DÖRPFELD.

below the surface, the walls of the largest house of the settlement were pierced; in which the fancy easily pictures the mansion of the chief or king, whose subjects dwelt in the lowly huts scattered around the slopes of the plateau. On these slopes, especially south of the cone, large quantities of broken pottery, resembling the earthenware of the acropolis recovered from among the ruins of the earliest settlers, were brought out of the ditches and shafts sunk by Schliemann. That this colony lasted a long time is indicated by the surest and most indestructible of memorials—mounds of ruin and rubbish over two metres in depth. How did it end? We know not; but it does not appear to have perished by fire. The stones of the upper rings of these erections lie piled up at the foot of the walls; but no fragment of baked or even crude brick has been seen in or around them.

The distinctive characteristic of this stratum is the almost total absence of metal. Objects of this nature, said to have been collected at a depth varying from thirty-five to fifty feet below the surface, are four copper knives, one of which shows traces of gilding, pins with or without heads, punches, a bracelet and an ear-ring made of silver. It is not much; nevertheless we are loth to believe that metal objects, above all the silver specimens, in reality can belong to the lowest stratum.

In saying this, we need scarcely add, there is no intention on our part to call in question the integrity of the most painstaking explorer that ever breathed; one known too for the care with which he noted down the precise spot where the objects were discovered; but it cannot be denied that errors, for which no one can be held responsible, may have occurred. When the work was proceeding which cleared the esplanade of the burnt city and its surroundings of some of the rubbish, so as to rest the foot of the sustaining walls, as well as the stairs and ramps, on the living rock, many an object which properly belongs to the upper strata may well have fallen and been landed on the level of the oldest dwellings. Even of late, whilst the great trench was open to the sky, how often must not masses of soil and ruin have detached themselves from the upper part of the talus and slipped down into the ditch? This may have been brought about either by a blow of the spade too heavily dealt, or during stormy weather when nobody was by. Schliemann

himself records a misadventure of this kind.¹ After the event, was it always easy, think you, to differentiate between the objects they found *in situ*, from those which had rolled there with the fallen rubbish?—for be it remembered it was not a piece of wall or a perfect vase upon which judgment had to be passed, but a slender, characterless punch of bronze or a light piece of jewellery; and is there any one who can tell us how long these insignificant articles were handled to and fro in the shovel ere attention was drawn to them?

On the other hand, there are no valid reasons why we should not admit that at Hissarlik, as in the prehistoric villages of Thera, the primitive inhabitants, whilst demanding of stone and terra-cotta the material for all their implements, were not wholly unacquainted with the use of metal. But if metal was exceedingly rare at the bottom of the trench, this was more than made good by the profuse abundance of stone found at the depth of from twelve to sixteen metres from the surface. Here were collected most of the axes, hammers, knives, and saws of Figs. 4, 6, 9, 10, 19, 20. It is quite conceivable that the finest-grained and most compact stones may refuse to lend themselves to certain uses demanded of them. Accordingly, as a rule, wood, stag-horn, and bone supplied the material for instruments which a patient and cunning hand fashioned into the required shape. Wood, being less resisting, has disappeared, but numbers of awls, needles, and pins of varied forms, amongst which is one with a stem in the form of a spiral, have survived. As regards the two or three ivory fragments picked up on this same level, is their remote antiquity well established? Utensils for every-day life were, as a rule, made of baked clay. Great jars, sometimes over two metres high, served as cellars for the preservation of food, or as reservoirs for water, oil, and wine. Instead of washing-tubs they used large terra-cotta bowls; of baked clay too were all their vessels for eating, drinking, cooking, and the like, the shape of which varied according to their destination, whether intended to go on the fire or on the table. Again, of terra-cotta were their hooks for hanging up clothes, the handles of their brushes, their ex-votos, and the weights of their looms and fishing-nets. We cannot wonder therefore at finding in the potsherds of their towns such enormous

¹ *Ilios*.

masses of broken pottery, amongst which however, we look, but look in vain, for traces of tiles.

As at Thera, here also we reserve the description of the pottery for a future chapter.

The layer representing the ruins of the first village is covered by a bed of vegetable earth, in depth *cir.* fifty centimetres; in itself this is sufficient proof that the site was left desolate for a long time. Above is a stratum of varying thickness, chiefly made up of soil and ruin, which served to build the esplanade of the second town. On the south side, the artificial mound supporting the esplanade was fifty centimetres deep only; but to the northward the distance from the virgin rock was redeemed by artificial soil three metres in height. Thanks to the uniform level thus obtained, our information at this date is particularly clear and coherent. The possibility of minute pieces of metal and ivory having got loose and fallen into the trench below cannot be reversed: fragments of terra-cotta and domestic utensils without number did not mount up the slopes of the hill to reappear in a stratum above that to which they originally belonged. But there is danger, no doubt, that by some mischance objects which in reality came from the ill-defined layers which cover the burnt city may have been ascribed thereto, owing to pieces having got out of their proper place when the accumulations of débris which form the esplanade were tumbled about. But their number, especially since 1890, is avowedly so small and insignificant, that it in no way affects the question under notice.

Under the direction of Dörpfeld, the excavations of 1890 have almost laid bare the whole radius of the second city; and most of the objects representing its industry were brought out of the ruins of contemporaneous abodes. These, which in the first village were comparatively few, are found here in much greater numbers; by their help we are enabled to test the standard of culture reached by the colony settled here, the civil state of which, so to speak, rested on a footing which shows a decided advance.

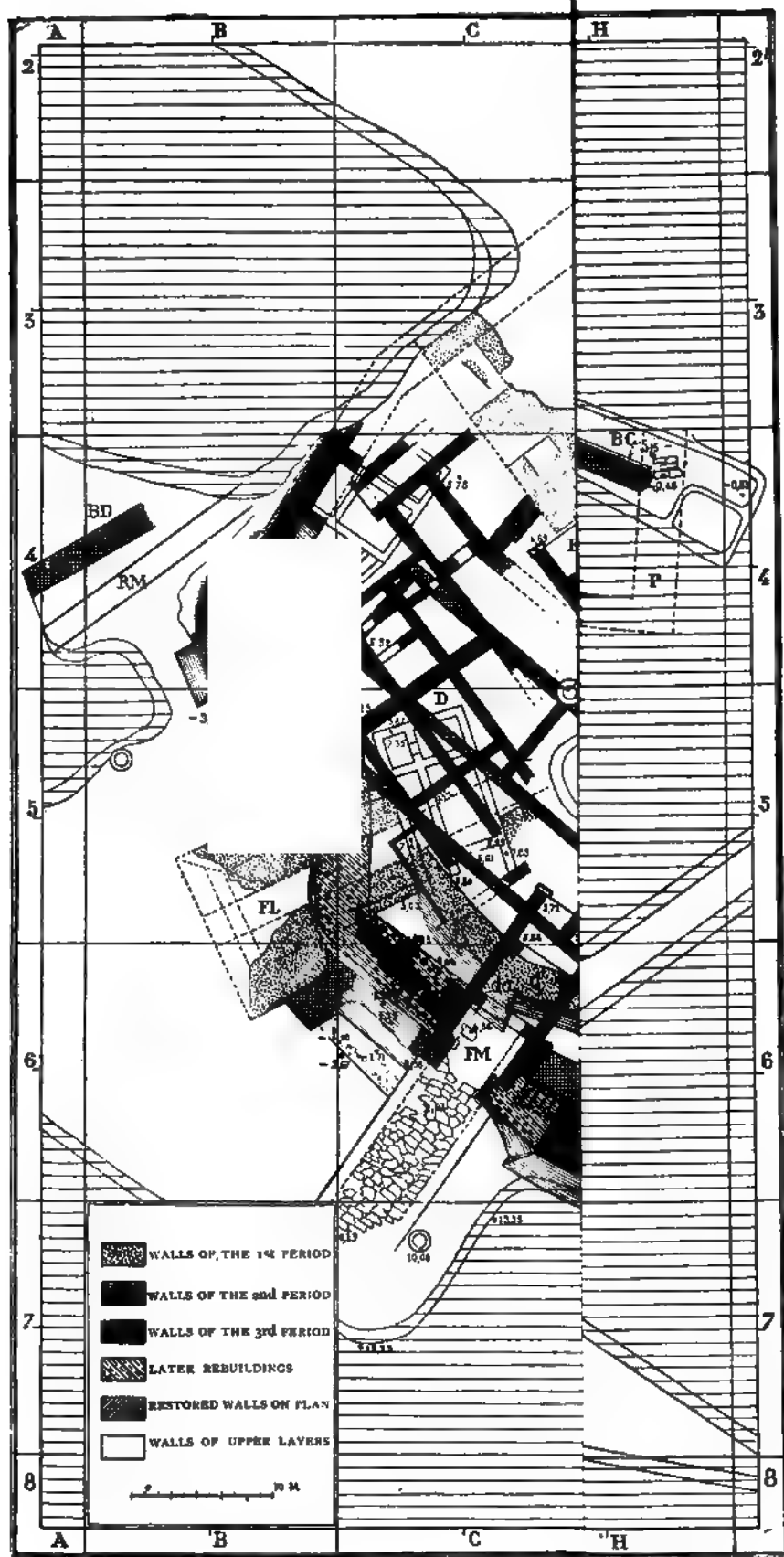
What strikes the visitor in going over the trenches opened by Schliemann at Hissarlik is the enormous rampart which surrounds the second city, and which plays the part both of a support and wall of defence (Fig. 40). His excavations of 1872,

prosecuted with passionate energy and utter disregard as to difference of level implying different epochs, not discriminating good from bad or indifferent in his eagerness to reach the rock, brought down this wall along the greater part of the northern face; but it was left standing and untouched on the three remaining sides, notably towards the south, where the enclosure was rebuilt and enlarged at three successive epochs. This is indicated in Dörpfeld's plan by different figuration (Pl. I.).¹ Thus, from the outset the student is made aware of the fact, which is further elucidated by inspection of the remains still visible on the platform of the burnt city, that it had three distinct periods: an older period when its walls and habitations were erected, and two later ones, when, as we have seen, they were enlarged and partly rebuilt. Nevertheless, the work which we find on and around the esplanade, does not exhibit notable modifications either in plan or detail, from which a change of population might be inferred. It is certainly the handiwork of one and the same people, whose life and history went on through crises and vicissitudes that will ever remain a sealed book to us. The terms of "first, second, and third" period are borrowed from Dörpfeld, who was led to adopting them after a close examination of the material and mode of building which obtained in this settlement. Like him we would estimate its duration as ranging from two to three hundred years, during which the small nation scattered about the plain carried on an unchequered and prosperous existence, but in troublous times found shelter and a centre of re-union on the fortress-hill. If this conjecture be found correct, a great many years may intervene between the erection of the earliest wall and that of the second, which rendered the first useless, between the time when the enclosure was first enlarged and the day when it

¹ The figures on the plan show the various heights of the surface, measured above and below a zero answering to the lowest level of rock struck by the spade at the bottom of the large trench, beneath the ruins of the first settlement. Some few figures on the south-east and north-east sides are preceded by a —; they indicate that here the foot of the circuit-walls of the second city is below the zero in question. Here and there, though rarely, two figures are found at one point; the first indicates the height of the primitive ground, and the second, which is bracketed, is of some importance as showing the level whereon reposes the foot of the adjacent wall. Hatchings mark such portions as are as yet untouched by the spade. The plan is oriented to the magnetic north.



FIG. 40.—Citadel wall north-west of gate, P M.



reached its full development. It required the keen eye and experience of Dörpfeld to discern architectural differences in these fortifications; for in truth they are so slight as to have been over-looked by the first explorers, who thought they were all built at one time. Apparently the construction is uniform throughout, and consists of a stone substructure surmounted by a wall of unbaked brick. Internally and externally, the lining of these foundations is formed of large slabs, laid in mud, and set out in almost horizontal beds; the core being made up of very small stones, loosely heaped up the one upon the other. Some of these slabs found in the wall of the second period are forty-five centimetres in length and twenty-five centimetres in height. The outer face of the rampart, almost throughout its extent, slopes at an angle of forty-five degrees, but its inner side is vertical. By this means a broader footing, and in consequence of it greater resisting power, were given to the wall, which on an average measures *cir.* three metres fifty centimetres to four metres at the top. Hence it is that nowhere has it given way to the enormous pressure of soil and ruin weighing on its sides. The height of this mighty substructure was flush with the surface of the esplanade; from which rose the rampart strictly so called, built of dessicated brick also bonded with clay. This portion of the wall is by far the most damaged. The surface was roughly plastered with fine clay; but when the town perished the outer coating peeled off, the rain penetrated the mass and washed away the mortar which filled the joints; and the units, being no longer held together, fell out and carried with them large pieces of the wall. If some rare fragments still exist, it is because they were betimes buried under a covering of earth and potsherds, which shielded them against the weather. This is the case on the east side of the enclosure, where I saw pieces of the mud wall still standing to a height of two metres fifty centimetres to three metres, and exhibiting patches of clay plaster on its surface. The very slight incline of the substructure would not prevent the invader from scaling it; for he could easily get a footing and hold on to the irregular and ill-jointed stones. That it was throughout surmounted by a brick wall is certain, even where no traces of it remain, but there is some doubt as to the manner of its ending—was it by crenelations? How easily a crenelated top can be made of brick is well known; here however the state

in which we find the rampart suggests another hypothesis. The brick wall near the gate F O, which there still rises to a considerable height, has its upper courses damaged by fire, whilst its foot is uninjured. This difference is best accounted for by supposing that a wood gallery ran a-top of the wall, in which the defenders of the fortress could circulate under shelter. A fire having broken out, set ablaze all this timber along the whole extent of the enclosure, and thence spread to the adjacent buildings. A very peculiar feature is noticeable in the brick wall: at stated intervals occur square holes, of about thirty



FIG. 41.—Wall of crude brick.

centimetres, at the side, which run right through it (Fig. 41); whilst here and there its external face is seamed by longitudinal grooves. What they mean will be more easily grasped when we come to the main building on the acropolis.

The first wall (dotted on Pl. I.) was already furnished on all its fronts with strengthening towers, a mode of defence which they repeated each time they enlarged the enclosure, without however binding themselves to rigorous symmetry. Thus, on some points of the earliest fortification, the towers are barely ten metres apart; but this space is doubled in the second wall. In regard to the question whether these masses of masonry should

not be considered as simple counterforts, it is sufficiently met by the slope adopted by the builder, which rendered a systematic buttressing superfluous. Spurs thrown out towards the plain, far from adding to the strength of the rampart, would have been a real element of danger; whilst the difficulty of building all these angles with irregular materials, with stones but roughly hewn, would well-nigh have been insuperable; added to which would have been the impossibility of fixing mortar on such narrow surfaces; the clay cement would ere long have peeled off, leaving gaps behind which time and the weather would have increased. The plan which obtained is only to be accounted for on a defensive basis; but the top of all these works having disappeared, no guess can be hazarded as to the inner economy of these towers. As their sole purpose was to enable the garrison to beat back the enemy from the curtain, no great dimension was given to them; they look quite insignificant by the side of the bastions in which were contrived the main gateways of the enclosure. The shape of these towers was rectangular, and about three metres wide, with a salience of two metres in front. The stately mass of masonry, in depth eighteen metres, which stands out about twenty-three metres from the wall of the first period, in the centre and a little way in front of the south side, should be noticed. Its foot follows the incline of the hill down to its base, and is in touch with the outlying plain; whence assuredly started a covered passage three metres broad, which led to the esplanade of the citadel (Pl. I. FN), but of which no trace remains.

The difference of level between the bottom and the summit of the mound of about four metres fifty centimetres was made good by the gentle slope of the covered way, and further increased by a sharp bend just before it debouched on the esplanade. At this point, however, those that did not like to make the *détour* could reach the citadel by a stairway, a few steps of which alone exist, later erections (c) having destroyed this portion of the ramp. The lower section, on the contrary, is in excellent preservation, and still retains its side-walls, seven metres fifty centimetres thick; we are thus enabled to reconstruct its plan and details, such as they existed when the ramp formed the best means of ingress to the fortress. Along the walls, spaced about two metres, were vertical beams, over which were placed horizontal rafters. A little

further the interval between these uprights was but ninety centimetres. They all have left their impress on the wall; carbonized fragments were even found in places, and traces of fire are visible everywhere. The lining-slabs of limestone are partly calcined, and the heat has caused the clay mortar to become red. Partly baked too were the crude bricks which filled the passage, and which had got broken in falling from the top of the rampart. The passage was covered, at any rate in its lower course near the plain; its wooden posts supported a floor, whereon, as also on the

FIG. 42.—South-west ramp, side view. 

walls, doubtless rose a lofty tower, of which the upper storey at least was of wood. It is plain that both the bastion and the ramp crossing it are coeval with the very beginnings of the second city; for the passage is perpendicular to the line of the first wall, whilst the two later fortifications intersect it slantwise. Even in those early days, besides this gate, the castle was connected with the plain by at least one more entrance on the south-west side (Pl. I. f L). Like the former, it had a sloping passage, which from the doorway, opening at the base of the mound, led to the platform. Speaking generally, and as far as



FIG. 43.—Showing pavement of south-west ramp.

the poor state of the ruins permits us to form a judgment, the same plan and details would seem to have been adopted everywhere; except that this second passage is narrower than that on the south face, being only two metres sixty centimetres, and that there is also a marked difference in the salience and surface of the tower. The first rampart had to come away down to its first course, to make room for the second, which was carried over the gateway and thus closed it. This second wall is indicated on Pl. I. by hatchings and the letter *c*; its best-preserved portion occurs between the two gateways just described (Pl. I. *cd*, *cb*), and a little farther west of these portals a great piece of it was also uncovered (*cc*). It is possible that in rebuilding the circuit-wall they tried to utilize the old gateways; but the notion, if ever entertained, was abandoned, and new entrances were built a few yards to the east of the old ones (*FM*), the thresholds of which had to be carried much higher up, so as to make them flush with the esplanade. Then too the sloping passage inside the wall was replaced by an external ramp or stairway. A series of steps led to gate *FO*;¹ but an inclined plane, carried by a massive substructure of white limestone, showing the same style of architecture as the wall close by (Fig. 42), extended in front of gate *FM*. This ramp (Fig. 44, *TV*), in breadth eight metres, has a very gradual slope that rises to the horizon at an angle of twenty degrees. It was covered with a bed of concrete, whereon were laid large flags of limestone; but they bear no trace of ruts made by chariot-wheels, whence it would appear that the path was used by beasts of burden (Fig. 43).² In plan, the primitive gate was more simple than the one we engrave (Fig. 44). At that time the ground-sill stood at the end of a recess *KC*, formed by the opening pierced in the wall *VB*, whose length was increased by two resaults, slightly jutting beyond the wall on either side of the passage *VV*. A space of five metres parted the piers of the double folding-gate.

A time came, however, when, feeling insufficiently guarded, they set up the second rampart, and in consequence of it the whole of the entrance had to be rebuilt. In front they were content with strengthening the wall by resaults one metre deep; but to the rear they extended by ten metres the side-walls of

¹ DÖRPFELD, *Bericht*, 1891.

² SCHLIEMANN, *Ilios*.

the vestibule and established a second entrance, with threshold and folding-doors (*u, u*), midway up the passage (*l m*) which they opened inside the enclosure. Posts, playing the part of *antæ*, were set up at either end of the wall facing the esplanade (*s p, s p*). Very similar posts probably leant against the outward wall; but there they have left no trace behind, whilst here they can be plainly seen on the ground; the carefully-made sockets in which rested these wooden pieces being still in place. The presence of this species of *antæ* suggests the notion that, like

FIG. 44.—Plan of south-west gate, F M.

the earlier gates, this one also formed a covered passage. That this work of defence ought to be attributed to the third period, is made clear by the side-walls of the passage passing over the remains of an older building, which they cross slantwise; for the latter had to come away when the body of the gateway was enlarged. As might have been expected, this gate, situate on one of the small sides of the mound, was not the only one the citadel had: a second portal opened in the middle of the south face, and, being close to the plain, was the most strongly fortified. The gate F O, uncovered on this same front

FIG. 45.—Western postern.

by Schliemann, offers a striking resemblance to the doorway on the south-west side, such as it appears to-day, after its many rehandlings and additions. The former was probably built when the passage running inside the great southern tower became obstructed (Pl. I.). Both entrances have double folding-doors, a recess, and thresholds, and a body of masonry at the back turned to the esplanade. The only difference is this: the south-eastern portal is statelier, its side-walls are thicker, and the path leading to it broader. If the gate FO passed through a primitive and simpler state, it cannot now be made out. The fortifications we have just described belong to the heyday of the life of the city. Confused vestiges of later erections, of flanking towers and walls, are also noticeable, raised, it would appear, in front of the gateway and extending on one side along the rampart, and on the other towards the opening, so as to contract it. These defensive works suggest the idea of having been hastily run up under pressure of imminent danger, or at the beginning of a siege.¹

Apart from these great gateways, were smaller ones, which might be used for a sortie, when prudence counselled to have the others barred and bolted. Of these one is still found hidden away in a re-entering angle of the wall, close to the old western gate (FK, Pl. I.). The bed of ruin and silt with which it was covered accounts for its marvellous state of preservation (Fig. 45); in the wall is seen the hole for the bar which served to close the doorway. Pierced in the rampart of the second period, this gate was furnished with a lintel and wooden jambs. As the workmen uncovered it, they found in place large carbonized pieces of the frame, which M. Dörpfeld had removed and replaced by iron girders to prevent the masonry from giving way. The door opened into a narrow, sloping corridor, which debouched into the upper portion of the passage FL. When this was blocked up, a flight of steps connected the postern with the topmost esplanade. No gates have as yet been reported from the north and east faces; but from the fact that a ramp akin to the incline of the south-western side (BC, Pl. I.) has been recognized towards

¹ DÖRPFELD, *Bericht*, 1891. What remains of these hurried constructions is indicated on the plan by broken, parallel strokes. The city never ceased to have here one of its main entrances; near and above the excavated gateway are the remains of two propylæa, dating from the Greek and Roman period respectively.

the north-west, where explorations have not been thorough, it is held that one at least existed here, by means of which the inhabitants of the citadel were placed in communication with the plateau, whilst by the south and west gates they descended into the plain.¹ It is clear that a ramp must lead to some kind of entrance, and the one in question may well have been carried through the enormous mass of masonry, probably a tower, marked M (Pl. I.).

With the survey of the gates, their displacements and rebuildings, which modified their plan and details, we have reached the third period, during which the circuit-wall assumed its greatest extent, and the most important buildings were erected. In all likelihood the radius of the city was enlarged on more than one side; but it lends itself to be measured on the southern face alone, where the last wall, composed of smaller units, in advance of the preceding one by six or seven metres, runs parallel to it. It is marked on plan by a dark tracing and the letter *b* (Pl. I.). The thickness of the wall of crude brick bears no comparison to that of the enormous stone substructure on which it reposed. If the besiegers succeeded in scaling the talus, they would have had to pay dear for the effort; reaching the summit half spent with fatigue and their numbers much diminished, the slightest barrier would effectually check their advance. Entrenched behind the mud wall, protected moreover in their rear by counterforts or piers jutting from the rampart from one metre twenty centimetres to one metre sixty centimetres, the besieged could oppose a stout resistance against the assailants. Traces of these works of defence are very apparent on the western side of the enclosure, where, observes M. Dörpfeld, are other similar walls of crude brick, mounting back to a remote period.² Nevertheless, as with the gateways, here also there came a day when they deemed these fortifications inadequate; accordingly they filled with bricks the intervening spaces of the resaults, thus giving a width of four metres to the wall curtain.

The explorers think they have uncovered this same advanced wall on the south-east, east, and north sides, where the fortifications of the first and second period still lie buried under a bed

¹ DÖRPFELD, *Bericht*, 1891.

² *Ibid.*

FIG. 46.—Ramp, south-west gate, and adjacent portion of plateau.

of soil and ruin. As on this side the mound rose very little above the plateau, from which it is separated by a shallow depression of the ground, the character of the fortifications was as unlike as it could well be from that where the hill rises sheer from the plain; hence the builder, finding that he had no need of a talus, suppressed it; and he contented himself with building a stone substructure with vertical faces, of barely one metre in height. A plinth, so low as to be well within man's reach, was a poor barrier against the assailant: the brick wall, whose lowest course he could touch, was therefore run up to a great height, given a depth of four metres, and strengthened with towers three metres twenty centimetres wide, spaced the one from the other six metres forty centimetres, with a projection beyond the curtain of two metres thirty-five centimetres (Pl. I. *ba, bc, bd*). Others doubtless lie underground.

The tracing of the wall on the northern face is as yet purely conjectural; this is the reason why it is indicated by dots on the plan. If on the last one (Pl. I.) the line representing it is carried a little more backward, it is because recent excavations have revealed the fact that the town extended further in this direction than at first was imagined. Like the circuit-walls, the erections whose ruins are more or less apparent on the platform were not all built at one time. The excavations, of which Fig. 46 is a graphic illustration due to M. Durm's pencil, have shown that their foundations near the south-west gate intersect and cover one another. Thus, on certain spots towards the centre of the plateau, opposite to the erections *AB*, three distinct and successive periods may be traced, in the superimposed ruins of buildings which not only differ as to their orientation, but in their plan and details as well. The edifices of what is called the third period appear to have been on a grander scale than their predecessors; built last, they are found in a far better state of preservation, and in places still retain a height of one or two metres.

The most important buildings have their face turned to the south-eastern gate (*FO*), which from beginning to end constituted the principal entrance to the citadel. Fifteen metres in front of and almost opposite to this same gate, though not in the prolongation of its axis, is a second one, parted from the first by a free space in which we guess a courtyard; but having only been

partially explored, its surface cannot be measured. Though smaller than that of the circuit-wall, this propylæum consists of a gallery seven metres eighty centimetres by three metres ten centimetres wide, and of side-walls one metre thick (Pl. I. c, and Fig. 47). It was divided into two unequal sections by the door strictly so called, whose site is marked by an enormous block of limestone, forming its ground-sill. Smoothed slabs were placed in front of the heads of the walls of the two vestibules, set back

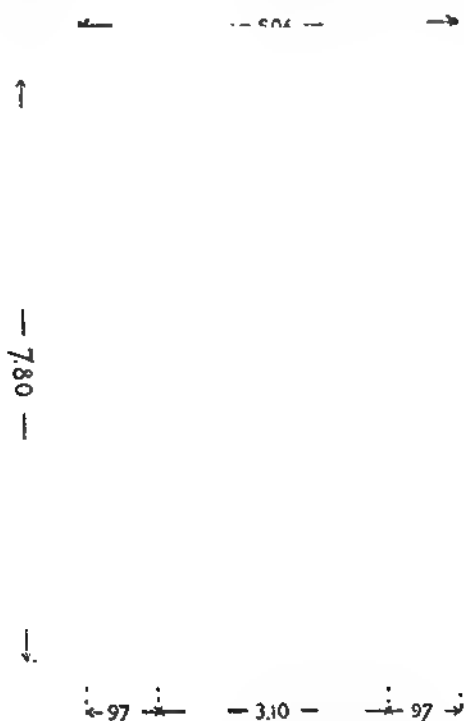


FIG. 47.—Plan of propylæum.

to back; they still show the indentations in which rested four wooden uprights, making up as quaint a pair of antæ as may be imagined. The floor of the passage, the apparent parts of the threshold and antæ, whatever in fact was not hidden beneath structures or timber plating, was covered with concrete. Connected with the body of the building, right and left of it, are walls of different epochs (*ha*, *hb*); here later rehandlings allow us only to descry, somewhat confusedly, an inner court, in length *cir.* twenty-seven metres by ten metres at its narrowest point. On the face turned towards the citadel these walls have resaults

and as it were counterforts, the purpose of which was doubtless to support a penthouse or balcony extending on three sides of the court, so as to afford shelter against sun and rain; in it we have the prototype of the porticoes with which architects of the classic age will adorn the front of their palaces and temples. Two buildings open on the northern side of this court, to which attention was particularly drawn both on account of the position they occupy in the centre of the esplanade opposite to the double entrance, as also by their exceptional dimensions and the character of the workmanship which they display. The decoration is entirely obliterated; but the masonry beheld here is more regular and shows that greater care has been bestowed upon it than anywhere else. These distinctive signs have led to the conclusion that in this architectural group we have the "palace" of the tribal chiefs; if the name is perhaps too ambitious and out of place at this date, it has the not unimportant advantage of being understood by all without further ado. With due reserve as to the sense to be attached thereto, we shall use the term for the edifices under discussion, as well as for the houses of the same nature which we shall find at Tiryns and Mycenæ.

Unfortunately, the larger of the twin edifices (A) has been shockingly mutilated, less by the weather than at the hand of Schliemann himself, who cut it right across from one angle to another, when he dug his great trench in 1872, and very nearly destroyed one-half of it. A plan however can be satisfactorily made from the remaining half (Fig. 48). It was entered by a large vestibule, open in front and nearly square; one side measuring ten metres fifteen centimetres, the other ten metres thirty-five centimetres. The doorway, pierced in the end wall and leading to a large apartment, gives us the width of the ante-chamber; its length however can only be determined conjecturally, for the left and farther walls have wholly disappeared, that to the right is alone standing, to within twenty metres of its point of junction with the partition-wall. Now, assuming that it terminated close to the spot where the spade cut it asunder, we obtain a relation between hall and vestibule of two to one: a relation at once so simple and felicitous could not fail to recommend itself to the architects of that early age.

In view of the mutilated state of our block of building, the question whether the great hall was not followed by a second in

its rear, or opisthodom, might have been a very perplexing one, but for the excavations of ancient sites in Argolis, which permit us to answer it negatively, in that a certain class of monuments brought to light there has for ever dispelled the cobwebs which obscured our vision as to the prehistoric palace. Accordingly, the plan of the edifice under notice would be reduced to its essential elements, for at Hissarlik we find but one ante-room, whereas elsewhere two are met: a fore-chamber, and a second in

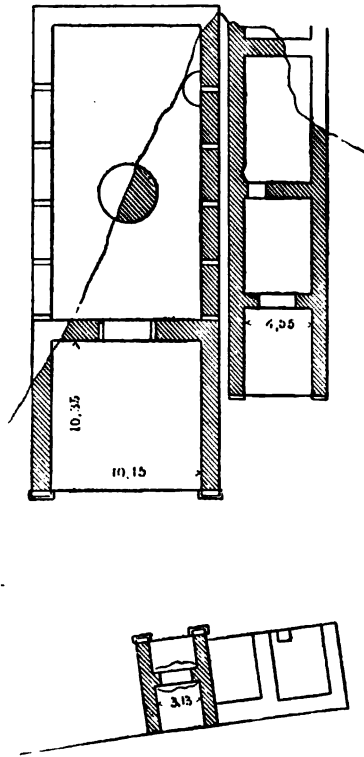


FIG. 48.—Plan of palace.

its rear. We have then no reason for believing in the existence of a back room, of which no trace exists at Tiryns or Mycenæ. The restoration put forward by M. Dörpfeld is the most likely of any of those that have been proposed.

The hearth was built exactly in the middle of the room, but a trifle nearer to the entrance than the farther wall. The spot is marked by a circular foundation made of clay, which still protrudes seven centimetres above ground. The excavations cut it in twain; its diameter, however, must have been well within this

side of four metres. Semi-circular foundations are found along the foot of the right wall. What did they carry? A row of pillars? The destruction of this side of the building is so complete that to hazard a guess, even conjecturally, would be vain.

By the side of this erection, and separated from it by a narrow passage, is a smaller one (B); like the former it is oblong in shape, and has a vestibule that opens outwardly. The resemblance ends here; its inner economy is widely different, having two rooms of unequal size instead of a single one. There seems to have been a fellow to this structure on the left of the main edifice or hall, where, on the thither side of the great trench, are two pieces of wall that cross each other at right angles (Pl. I. E). They are all that the great trench of 1872 has spared; such as they are they suffice to give us the width of the building, which is that of the smaller chamber B. The obvious induction to be drawn from this coincidence is that it extended to the length as well. We are thus enabled, by a very specious hypothesis, to reconstruct a unit composed of a central pavilion, flanked by minor and lower ones. Though close to each other, these erections were quite detached, a narrow space intervening between their external walls. In order to go from one pavilion to another, one had to go through the common courtyard. Was this isolation demanded by social exigencies, or should it not rather be set down to the inexperience of the builder? It was a much easier plan to set up three independent blocks of building, than to construct a whole sufficiently large so as to provide apartments for carrying on public and private life, and special ones for keeping the sexes apart, for which a whole system of covered passages and entrances had to be contrived in order to connect them the one with the other.

It is inexpedient to say much of the remaining structures marked on M. Dörpfeld's plan (Pl. I.), for little else than the foundations remain, and the ground has kept no trace of doors having stood there. All we need remark in regard to the building D, situate to the southward of pavilion E, is that it consisted of several apartments, and that in all likelihood it had its front turned to the courtyard of the palace, of which it formed perhaps an annex. The ground-plan described above, made up of a great hall preceded by a vestibule (H, K), is repeated in the erections found north-east of B. The whole has been rebuilt throughout.

The charred remains of the wooden threshold of chamber K were still in place. Little is to be made out of the two great masses M, N, of which foundations alone subsist. As towers, they may have flanked the north-east gate, or perhaps formed part of the rampart of the first or second period, ere this front of the enclosure was transferred farther east.¹ The peculiar mode of construction revealed by these ruins may be studied with much greater ease than could be done in the circuit-wall. Thus, stone substructures are everywhere surmounted by crude brick and timber; the thickness of the walls in the principal building is one metre fifty centimetres, and the height of the stone substructure two metres fifty centimetres, one metre to one metre

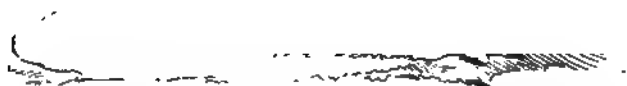


FIG. 49.—Stone substructures of mud wall.

thirty centimetres being taken up by the foundations (Fig. 49). At the head of the walls, right and left of the fore-chamber, the spade has uncovered sockets of limestone, in which rested uprights twenty-five centimetres at the side (Fig. 50), charred traces of which, nay even fragments, were still in place. The brick walls surmounting the substructures deserve careful description. The squares of which they are made containing chopped straw and bulrushes, measured on an average sixty-seven centi-

¹ These masses of masonry are now divided by a large excavation filled with river sand several metres high, forming a band which, in Dörpfeld's estimation, would correspond with the circuit-line enclosing the area on which rose the temple of Ilian Athene. The dimensions of the rectangular area bear a remarkable analogy with those which have been computed from the metope and the triglyphs discovered on the spot, out of which a reconstruction of the temple has been attempted.

metres in length by forty-five centimetres in width, and from ten to fifteen centimetres in depth. These bricks were bonded with clay of somewhat different quality from that of the squares; its colour is lighter, and the straw mixed in it chopped up much finer. The joints between the stones have a mean width of three to four centimetres (Fig. 51). They were covered with a thin coating of white clay.¹ Here and there on these walls, at a distance of four metres from each other, appear transverse poles, which run far out into the depth of the wall; whilst some of the bricks are seamed from top to bottom by grooves, rendered very shallow by the disintegration of the outward sur-



FIG. 50.—The palace, present state, showing ground-sill and sockets of wood antæ.

face. Around these cavities, half filled with ashes and charcoal, the bricks have been burnt to a dark red. Traces of smoke are visible for a short distance, then farther away from these orifices the desiccated brick resumes its normal aspect. Numbers of squares, whether found away from the holes or in the lower courses of the wall, bear no mark of the action of the fire,

¹ A small sea-shell, *cardium edule*, abounding in the waters close by, is found in large quantities in these bricks. Virchow thinks them due to kitchen refuse, the shells having been thrown away after the mollusk which they contained had been eaten: they thus got mixed with the earth of which the bricks were made. The clay contains many other impurities, bits of old pottery, bones, etc.

because they were immediately covered with ruin and soil when the building collapsed. That the wall was made of mud is plain; and is further proved by the fact that around the channel-like cavities, the mortar which served to join the bricks is like these baked or rather burnt.

At first Schliemann thought that these erections had some analogy to the "vitrified forts,"¹ as they are called, that have



FIG. 51.—Wall of crude brick.

been discovered in Scotland and France. If the fire, he argued, thus far modified the condition of the clay of brick and mortar, it was because the builder had purposely set fire to it himself, having previously filled these channels with chips and faggots, in order that his wall should become more compact and abiding. Better informed by his researches at Tiryns, M. Dörpfeld pointed out

¹ A list of the principal works dealing with these circuit-walls, down to 1872, will be found in a Memoir by M. J. MARION, *Les monuments celtiques et scandinaves des environs d'Inverness*.

the unsoundness of this hypothesis. With a great stretch of imagination, it might account for the transverse holes; but what of the superficial furrows—what end did they serve? Then, too, what would have been thought of a builder whose means were so out of proportion with the end obtained; who had been at the trouble of contriving holes through the massive masonry that he might partially bake some few bricks in the immediate neighbourhood of the channels, leaving all the others untouched? Had the mason meant that his wall should undergo such an operation, he would assuredly not have put straw into his bricks. Clay that has to be dried in the sun is all the better for a little straw



FIG. 52.—Brick wall restored.

mixed with it, and the method was adopted in lands other than the Troad;¹ but the practice becomes positively injurious the moment the bricks have to go through the kiln: straw will not only burn at no very high temperature, but will entirely blister the brick, making it more friable and detracting from its compactness and solidity.

In reality both holes and grooves served as lodgment to timber-ties whose function was to maintain the horizontality of the beds and distribute throughout an even pressure (Fig. 52).² When the conflagration took place, the beams were of long standing

¹ *History of Art.*

² The above drawing shows the vertical beams in their original position, whilst the transverse pieces are represented by hollows.

in the wall, and much shrunk from their original size, so that they no longer filled the cavities in which they were thrust. The terrific storm raging outside, when all the woodwork about floor, roof, and wall was kindled, entered the interstices that intervened between the timber and the clay of these walls, and carried destruction into the very heart of the mass. Thus, no intermediary supports have been detected in the space of over ten metres which separates the side-walls at A. That the flat roof consisted then as now throughout the Troad of a bed of beaten earth over which a stone roller was passed after the rain, is pretty self-evident; for no tiles have been exhumed, and the ancient floor of almost every chamber was covered with a layer of earth about thirty centimetres thick, mixed with wood and ashes, the relics, it is supposed, of the fallen loft. The clay covering of the roof was supported by beams at least eleven or twelve metres in length, and sixty centimetres in thickness, and over it were laid many joists, rushes, and branches. They all gave way in the general fire, and went on burning on the ground where they had fallen. The floor, both in the vestibule and hall, was made up of a bed of concrete: the clay has become vitrified, and the earth throughout the area, to a depth little short of fifty centimetres, has become black. The walls near the doorways and antæ, more than anywhere else, bear traces of the intense heat to which they were exposed, for here the flame was fed by the wooden doors and the beams found at the heads of the walls; and the crude brick was so thoroughly modified as to have been transformed here into vitreous paste, there into scorix of incredible hardness and opacity. The general character of the conflagration, its having been carried on at so many points at once, forbids us seeking here the effect of a mere accident. A victorious enemy whom long and stout resistance had enraged, could alone have destroyed the place root and branch, and left no tower, or house, or even door intact. A few words dealing with the industrial products of the second city may be added here, so as to make our picture more complete; a full description of its manufactures and its arts will be found in another place.

In going over the objects that have been picked up in these ruins, we are struck, on the threshold, by the decided advance observable between the first and second period; and by the place metal has assumed in the life and appliances of the tribe, which

was all but unknown to the inhabitants of the primitive village. Metal has not yet dispossessed or replaced stone everywhere or for everything ; but the wide range of the services demanded of it suggests the idea that it was beginning to be domesticated in that part of the world, when the second city rose upon the mound, and that henceforward it became more and more common, each fresh generation bending and adapting it to new uses. From the first year of his excavations, Schliemann found in this stratum notable quantities of gold, silver, lead, bronze, or rather almost pure copper. Iron alone was wanting. In 1890 it made its appearance, accompanied by four stone axes, in the foundations of a building which can only belong to the second epoch (Pl. I. N), in the form of two balls, held to be knobs for walking-sticks.¹ Gold has furnished cups, hair-pins, ear-rings, trinkets, discs, bracelets, etc., sometimes adorned with spirals in true Mycenaean fashion. Silver is still more abundant ; besides a kind of spatula or broad knife, it has given vases of varying form, and ingots of unequal length but almost equal in weight. Like the "Homeric talents," they may have served as means of exchange. A nude female representing a rude idol was made of lead ; the attributes proper to woman are grossly exaggerated, and recall certain divine types of Anterior Asia. Copper was cast in moulds of mica-schist, of which numbers were unearthed, but axes, knives, scissors, daggers, arrow-heads, and the like were manufactured out of copper ; so too were hammered up leaves, and cups, and vases.

Progress is no less marked in pottery, where we find great variety in the shapes, and more refinement in the decoration. Black vases still obtain ; but nearly all are cast on the wheel, and forms traced with the point on the moist clay have given way to a more ambitious scheme. The charm of colour, with its potentialities of play and contrast, are as yet unrevealed to the artist's vision ; but ornament is suggested in the modelling ; whilst his attempts to delineate the human form in relief, if in truth singularly rude and clumsy, are not void of intention, and can be grasped by all. Now appear those vases, on the necking and body of which are represented eyes, nose, and woman's natural attributes, and sometimes even indications of arms. The animals we find portrayed here are those of the country : mules,

¹ SCHLIEMANN.

hogs, and porcupines. Even when the aim of the potter is less ambitious, the relative elegance and variety of his ceramic types reveal a mind on the alert. This is evidenced in long-necked jugs, in shapely goblets with graceful curves and bold, out-standing handles, in drinking-cups joined together at their middle, etc. He sometimes fashioned his local deities in gold or stone, but more frequently still in the clay ready to his hand. The least shapeless of these betray a clumsy effort to copy, if not the human face and body, at least to suggest them by some arbitrary indications. Clay lends itself kindly to translating the early religious concepts of this community, and is no less docile in yielding shapes suitable to the exigencies of a social status which is beginning to exhibit a certain measure of refinement and complexity. Two specimens will suffice. A terra-cotta plaque

FIG. 53.—Brush-handle of terra-cotta.

was found with three perforations, one of which still retained a large hook clearly intended to be fastened to a wall; it was a hook-stand on which were hung weapons or clothes.¹ The next is a diminutive, three-sided pyramid of yellow clay, with a hole for suspension, and a number of fine holes at its base (Fig. 53). The only explanation and also the most plausible which has been put forward as to the probable destination of this peculiar object, is its having served as a clothes-brush. Small bundles of silk² were passed through the holes, and constituted the brush proper. Such pieces are rare; on the other hand, from this same stratum, flat discs, commonly called fusaïoles or whorls, came by thousands (Fig. 54). Whilst employing the term "whorl," we wish the reader to understand that we do so provisionally, and hope later to prove that the services demanded of them were of

¹ SCHUCHARDT, *Schliemann's Ausgrabungen*.

² More probably stalks of plants.—TRANS.

another kind. Cones and cylinders, incised with bars and lines so as to form the herring-bone pattern, crosses, stars, and dots, have been recognized as seals (Fig. 55). Some of these cones and fusaioles (Fig. 56) exhibit on the handle and base signs supposed to have come from the syllabary which the Achæan colonists of Cyprus employed for noting down the sounds of the Greek language;¹ but we cannot say that the assertion has as yet been proved. On one or two pieces submitted to Prof. Sayce, he would recognize characters of this same syllabary; what they really contain are geometrical forms of the most elementary kind.² Elsewhere the conjecture would almost seem to be correct, and one is tempted to admit the presence of a

FIG. 54.—Fusaioles. Drawn from the original pieces.

short inscription. But much remains to be proved, and all has not yet been made as clear as one could wish. Nevertheless, we are quite ready to have it proved by fresh excavations that the alphabet under discussion was then current in the Troad; did not we adduce instances, which led to the conclusion that its employment was universal in the peninsula before the diffusion of the Phœnician script?³ But it seems probable that monuments likely to solve the question in this sense, if ever they are discovered, will be found in the strata above the burnt city, rather than amidst its ruins.

To the second settlement are ascribed several pieces bearing on the question which perplexes us; nevertheless, even admitting

¹ *Ilios: The Inscriptions found at Hissarlik*, by A. H. SAYCE.

² SCHUCHARDT, *Schliemann's Ausgrabungen*.

³ *History of Art*.

that the several levels were carefully noted down, are not fusaïoles, cones, and cylinders, owing to their shape and lightness, of the kind that are most easily displaced and rolled down with the soil, whilst this was being tumbled about in every direction?¹ Lastly, it is important not to lose sight of the conditions under

FIG. 55.—Cones and cylinders.

which the new inhabitants established themselves on the mound after the fall of the citadel, when the aspect it offered was an uneven, broken surface. Here rugosities proclaimed the site of the main buildings, there chasms marked that of ancient courts and thoroughfares. The men who were induced to fix their

FIG. 56.—Fusaïoles. From the original pieces.

domicile on the fortress-hill, because of its natural advantages, did nothing to alter its configuration, and left it exactly as they had found it. Accordingly, some of their houses almost rest on the regular soil of the previous settlement; whilst others have no better foundations than heaps of potsherds, and thus tower metres high above their nearest neighbours. It may well happen

¹ See above, p. 173.

that objects formerly landed on the floor of some hut of the third period may now be lodged in the embankment supporting the esplanades of the second city; we should go wrong, however, in classifying the objects found in it with those unearthed on the platforms, in that the embankment was built out of the ruins of the first village. From the fact that the foot of the houses erected after the fire is not always on the same level, there is great difficulty in rightly dating pieces said to have come from one or other of these two superimposed strata, which in places get hopelessly entangled the one with the other. We attach little importance to the belief which would place the knowledge of writing in the dim past to which the buildings of the burnt city certainly belong. The anomaly would indeed be great, were it proved that this part of the Troad, which in every respect was less advanced than Tiryns and Mycenæ, was in possession of a script as yet unknown to the cities of continental Greece.

It will be time enough to give in our adhesion when the field of our observations, being much enlarged, can be brought to bear on a greater number of objects bearing upon them these alphabetical signs; objects which from the position they were found to occupy at the time of their discovery, might unhesitatingly be ascribed to the inhabitants of the burnt city. Pending the proof to the contrary, we shall hold to our opinion that if the Asianic alphabet was employed at Hissarlik, it certainly was not until after the catastrophe; perhaps only when the desire arose among the dwellers of the Ægean coasts to possess an instrument that greatly facilitated communications, and was a powerful aid to memory. The event may be placed about a hundred years before the spread and triumph of Phœnician letters.

From the burnt city up to the mound's surface, MM. Schliemann and Dörpfeld ultimately made out seven distinct layers of superimposed habitations.¹ I went with them over the works, and on the spot listened to their explanations; but I confess to a feeling of surprise at the precision of the figures. It is quite possible that on this or that point, the eye, running from the bottom of the trench to its upper rim, may detect, in the vertical plane, seven grades of erections; but remembering the irregu-

¹ *Bericht*, 1891.

larity of the soil, it is impossible that this should be the case everywhere; nor can the explorers distinguish the several settlements from the presence of a bed of vegetable earth interposed between any two layers of buildings, as they were able to do for the first and second city. The people which, after the fall of the city, selected its seat on the mound, seems to have carried on its narrow existence without a break. Small, insignificant houses were built on the ruins—from about one to two metres deep—of the burnt city. When one of these dwellings succumbed to the hand of time or that of man, a very similar one rose in its stead. These houses were of course ill built, and the excavations have revealed the fact that their walls were not always on the same level, nor did they always cross each other at right angles; the difficulty therefore of singling out distinct periods will be readily grasped. Proceeding from base to crown, we continue to find the same-shaped vases and utensils, the same rude idols, until we meet broken pottery, first with black then with red figures, amidst walls of goodly aspect made of polygonal stones. From these and other indications we guess the presence of Hellenic culture. A little higher up we reach the foundations of the Græco-Roman town, recognizable from the regularity of their beds and the fine cut of their stones; then we come upon a ground strewn with pieces of marble, with pillars, friezes, and cornices of temples and other public buildings that once adorned the acropolis of Ilium. In all these layers are found numbers of huge jars ($\pi\acute{\iota}\theta\omicron\iota$), quite intact or but slightly damaged, standing against the walls of the buildings, still half filled with the grain or dried cereals that were kept in them (Fig. 57). We do not pretend to set forth an orderly enumeration of the layers of ruin and broken pottery covering and mixing the one with the other up to the very summit, but will restrict our remarks to those objects from the lowest strata as are of paramount interest. The tribe which re-occupied the site after the enemy had gone away and the effects of the fire had subsided, seems to have been some time in winning back somewhat of the old prosperity. The houses resting immediately on the ruins of the burnt town have a very poor aspect; but a little higher up we find vestiges of more spacious dwellings, built with greater care, and with stones of larger calibre (Fig. 58). One of these buildings,

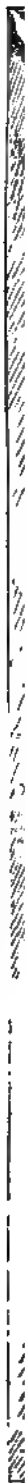


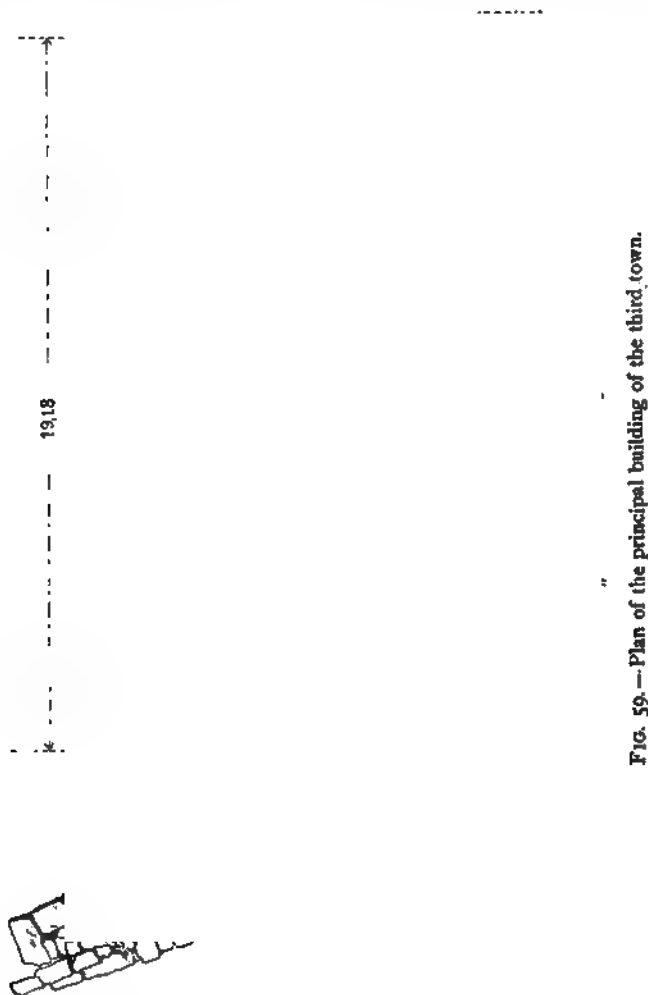
FIG. 57.—View of the trench through the small theatre or bouleuterion. The stones seen on the right, as well as the flight of steps behind the pithoi, belong to this building.

uncovered by Schliemann in 1873, has had the attention of the world drawn to it, because the explorer identified it with the "palace of Priam" (Figs. 58, 59). But if the mythical cycle of which Troy is the centre may be evoked in connection with Hissarlik, we shall presently show that it is rather referable to the second city than the earliest village; it is quite possible, however, that these ruins are what remains of the chief's house who, a century mayhap after what we would willingly call the sack

FIG. 58.—View of the principal edifice of the third town.

of Troy, ruled over the population established on this spot. The plan of its main apartments, in all essentials, is that of buildings in which we have recognized a lordly mansion. Like these, it has a vestibule four metres twenty-three centimetres deep by nine metres ten centimetres wide, opening into a hall, in length eleven metres fifty-five centimetres. To the right of this vast apartment appear traces as of foundations; are these some sort of stylobate, and was the hall, inside, divided into three naves by a double row of columns? The marks left on the ground are too evanescent to permit us to dogmatize on

the subject.¹ With or without columns, the plan would suit a temple equally well: one is tempted to ask if these are not the remains of the temple of the Ilian Athene which stood here in the time of Strabo, when Ilium was but a poor, open hamlet, which he designates as small and insignificant.² Its rustic appear-



ance, instead of detracting from the veneration which surrounded it, would have added thereto, and helped the inhabitants to pass it off to the simple and credulous visitors as synchronous with Homeric Troy. Whatever its original purpose, the building is of unquestionable antiquity. In the débris that filled the hall

¹ DÖRPFELD.

² STRABO.

and adjacent erections were heaps of broken pottery, amongst which were several vases in perfect preservation, bearing a striking analogy to Mycenaean ceramics: shapes and forms are identical.¹ Besides these vases, imported it may be from without, and the black pottery of the lower beds, we find a monochrome grey earthenware, which Schliemann collected from all the neighbouring tumuli, and seemingly due to local industry, for very similar coarse pottery is made all over the Troad at the present day.²

According to M. Dörpfeld, the inhabitants of the third village rebuilt as well as they could the ramparts and portals of the burnt city; marks of these repairs are especially noticeable at gate F O, whilst he traces a later wall near the south-eastern entrance, which was thrown up to cover a group of buildings erected outside the old enclosure.³

An incident relating to Philip of Macedon, *i.e.* about the fourth century B.C.—noticed by Plutarch and Polyænus,—tends to prove that Ilium was already a fortified place when Lysimachus surrounded it with a wall.⁴ Slight though this data may be, it adds somewhat to the little we know of a hamlet bearing so glorious a name, and confirms the notion suggested by the ruins that the hill was inhabited from the earliest times down to the end of the first period and after it. It remains to discuss whether we should identify the buildings and rampart discovered by Schliemann with the houses of Priam and Hector, and the circuit-wall erected by divine agency. In a word, is it on this hill, or on some one or other of the heights overlooking the plain of the Scamander, that the predecessors of Homer and Homer himself placed the Troy that formed the subject of their lays? Even had our narrative contented itself with the simple account and general results of Schliemann's excavations, without once naming or even alluding to Troy, their importance would in no way have been impaired, or his discoveries robbed of their value; for they would none the less have unrolled a new chapter for the history of culture and art.

We are loth to adopt a line of conduct which would seem

¹ SCHLIEMANN and DÖRPFELD. All the vases and fragments belonging to this series were studied and drawn on the spot by M. Brückner, a member of the German Archæological Institute.

² SCHLIEMANN.

³ DÖRPFELD.

⁴ PLUTARCH.

to ignore the sharp contentions to which these discoveries have given rise, not only among learned societies within university precincts, but in the outside world as well. The names of Troy, Ilion and Pergamus, of Simois and Scamander, call up pictures that are apt to set aglow the imagination of any man, with however slight a tincture of classical lore, on whose ears have fallen the distant sounds and faint echo of Homer's immortal song. It is because Schliemann has established a close relation between the memories of the Greek Epic and the fortunate discoveries that serve as illustrations to it, that he has aroused the sympathies of the general public, such as nought else would have done. But for the interest they excited among all cultivated classes, we should not have seen the great political organs, especially in England, open their columns to reporters detailing day by day the progress and successes of the excavations at Hissarlik or Mycenæ, and later the polemics which these same discoveries provoked. This is our reason for approaching the question as to the probable site of Troy, insignificant though it may appear now-a-days, viewed from the platform to which higher criticism has reached. The historian unconsciously and in spite of himself falls under the magic spell of the poet, he longs to find and fix somewhere the theatre of the now charming, now pathetic scenes of single combats between gods and heroes, of varying pictures unfolding in recitals which he knows all the time to be mere fictions, but which so oft kept him enthralled. Since the problem has to be faced, the first thing we must do is to be quite clear as to what we ought to think of the *Iliad* and its method of composition. From the idea we shall form of it, will depend the amount of positive history and geography which we shall distil from the poem, our only source of information of what we know or think we know in relation to the siege of Troy. Time was when nobody dreamt of discussing the problem; for Homer was supposed to be contemporary or almost contemporary with the events which he recounts. Was not the question propounded whether the poet might not be one of the heroes of his poem? The absurd hypothesis according to which Homer was nothing but Ulysses in disguise did not long survive its birth; it is instructive nevertheless as illustrating the processes and tendencies of a criticism which passed muster in by-gone days. Criticism was then concerned with singling out the real

facts from the body of the poetic narrative, which, it was held, Homer had intentionally projected, embellished, and amplified with the introduction of the supernatural, such as the perpetual interventions of the gods in the combats fought by heroes and the like. The *Iliad*, according to the critics who were also the scholars of that day, had been largely composed on the lines of the *Æneid* and the *Jerusalem Delivered*; hence all the passages meant to while away and amuse the fancy were to be rejected as exaggerations not intended to be received as sober fact; but details bearing upon topography, statistics, and military operations had to be taken literally and implicitly believed.

Since the last century, however, the comparative method applied to linguistic studies has been adopted for literature, and the result has been a general shifting of the old standpoint. Epics have been defined as primitive and spontaneous, as opposed to artificial and learned poems; a distinction which, though holding a large grain of truth, should be clearly grasped and not strained beyond its proper bounds. Wolf, in his famous *Prolegomena*, was the first to show that the songs which make up the *Iliad* came into existence in an age ignorant of writing, and that they were preserved for several centuries by memory alone. The labours continued by his successors have led them to distinguish two periods in the genesis of the Epic: one when the exploits of the Achæan heroes were celebrated in short poetic rhapsodies, wherein each hero in turn played the principal part; the second when a bard called Homer, endowed with a genius far transcending that of his predecessors or contemporaries, composed the *Achylleid*, a poem of considerable length, which his successors touched up and developed. It was then taken up by the Rhapsodes, who carried it from one end to another of the Greek world. The poem began to be written about the time of Solon, when it underwent many improvements and rehandlings at the hand of scholars entrusted with the task, and finally received the form by which, under the name of *Iliad*, it is known to us.

Comparison of the Hindu, Persian, Finnish, Scandinavian, Teutonic, and Frankish Epics one with the other, makes us realize how infinitely small is the fund of historical truth, around which gather and multiply the brilliant crystals of Epic fiction. However insignificant this residuum may be in the above

instances, we should in vain look for it in the *Mahabharatta*, nor should we fare much better in regard to the *Shahnameh*; for though a faint echo of the warlike deeds of the Achemænidaë is traceable in it, the facts which it relates are so contorted and transformed as to be almost unrecognizable. The presentation of Theodoric and Attila in the *Nibelungen* is known to all. Without going from home, we find in the French Epic a striking example of this power and independence of the imagination. An insignificant affray relating to the destruction of a French detachment surprised in the ravine of Roncevaux, which Eginhard mentions in a couple of lines, has assumed in the poem the proportions of a heroic and gigantic strife, in which all the forces of Islam are gathered together from every quarter of the globe in order that they may fight against the Christian hosts; in it Charlemagne is depicted slaying with his own hand the Sultan of Babylon, to avenge the death of Roland and his gallant companions.

The Epic was long held as a primitive and poetic form of history, which so far penetrated and merged into the latter as to be hardly separable therefrom. By a reaction natural in such matters, as soon as higher criticism became aware of its error, it sinned in the opposite direction. There were found scholars who maintained that the *Iliad* was to be viewed as a late form of the great heavenly battle sung by the early poets of the Aryan race, which is being perpetually fought on high between Indra and Vrita, between the sun and the cloud, a battle which the Æolian Greeks localized in the Trojan plain, just as the Hindus had placed theirs on certain sites of their peninsula. Like Rama, Achylles was to be considered a solar god. That there is here much fantastic exaggeration is manifest. We are not competent to discuss in detail the elements that go to the making of the Hindu Epic, and the type of the heroes that figure in it; but it is quite clear that if certain echoes of these naturalistic myths have found their way into the *Iliad*, the spirit that breathes through the latter is profoundly opposed to that wherein the poems of ancient India find their noblest and most characteristic expression. The Epos is not so much concerned with ethereal phenomena, as with events which are taking place on the earth; to use a modern phrase, its main characteristics are distinctly feudal and warlike. The Greeks, with a disposition

less prone to dreamy contemplation than the Hindus, created a style of poetry quite different from theirs. Hellenic bards sang of the combats fought by their ancient princes, and of their adventurous life during the time of their dominion over the cities of Ionia and Æolia. The *disjecta membra* of all these tales are incorporated in the *Iliad*, whose form, thanks to the immeasurable superiority of its author, set the fashion for compositions of the like nature. They all contain a modicum of historical truth, but how disproportionate is the real and original event, when measured with the strength and importance it acquired in process of time, has been abundantly shown above. In working back to the first germ of the poem, the supernatural element has naturally to be eliminated. For the Hellenes these wonders were like other facts, and therefore equally worthy of belief; for us they are but inventions of minds as yet unable to discriminate between what is physically possible and what is not. Untrammelled by facts, the imagination of the bard, mounted on Pegasus, proceeded to set forth the sequence and incidents of the battles fought around Troy; for the setting of his picture, however, he turned to the scenes that were being enacted around him. As long as this theme was in vogue, each minstrel tried to outdo his neighbour by putting some new feature into his tale. Thus one bard, in depicting the duel about to take place between Hector and Achilles, invented the scene in which the warriors draw lots for it. Another brought in Aphrodite urging Æneas to measure his strength with Diomedes, and a third made the combat between Patroclus and Sarpedon the subject of his lay. Again, one celebrated the contest which took place beneath the city walls, another magnified the struggle for the body of Patroclus into a general battle, fought by the hollow ships and near to divine Scamander, whilst a third reserved himself for the fateful action which deprived Troy of her mainstay. Each of these minstrels had his favourite hero, and each strove to excite the attention of his audience by some trick of language, some detail that should differ from what had been acclaimed but the evening before. Out of all these freshly-minted episodes—and their number must have been large—Homer selected, remodelled, and incorporated into his main tale such as appeared most interesting to him. We know that one of these episodes, the Dolonia,

either intentionally discarded by Homer or composed after his death, was clumsily enough embodied in the *Iliad*, under the Pisistradæ, by the editors of the poem. A right understanding of the true origin of these several tales forbids us to regard seriously the work of M. Nicolaïdis, entitled, *Topographie et stratégie de l'Iliade*, implying as it does the notion that the poet has described the phases of the strife between the besiegers and the besieged much after the fashion of a staff-officer who had been an eye-witness of the war operations which he sets forth, or had learned them from official documents, in the marching orders daily issued by the commanding officer. It is assuredly somewhat childish to tell the story of Troy as M. Nicolaïdis does, precisely as an authority on military topics might write of the Allies before Sebastopol.

To return. Very similar observations are suggested by looking narrowly at the chief personages of the drama. One and all are the mythical ancestors of the Æacidæ, Atridæ, Nelidæ, Pelidæ, etc., those great reigning families which provided rulers without ceasing for the rising townships of Asiatic Greece during the whole period of Epic poetry. In all this there is nothing which in the least resembles our notion of history; yet several centuries separated Homer from that far-off age when bands led by adventurous Achæan chiefs had swept all over the eastern portion of the Mediterranean, founded states such as that of Mycenæ, and carried the strength of their arms as far as the Delta. Tradition had kept no record of that distant period, save a few names and the vague remembrance of expeditions to far-off lands, of treasures accumulated in fastnesses and seized therefrom; but it knew nothing of the personal character and disposition of the captains of that era. The heroes and heroines of the *Iliad* and *Odyssey* are but the reflex of the poet's own imaginings, of his ideas in regard to obstinate, reckless, or deliberate courage, the wisdom of old age and the passions of youth, of conjugal, filial, and maternal love; all his types are derived from personal observation, be their names Ajax or Achylles, Diomedes or Odysseus, Paris, Nestor or Priam, Helen or Andromache, Penelope or Thetis.

What then remains in the poem which has any right to be considered as having a foundation in reality, as presenting a more or less decided historical character? The setting first of all.

The requirements of the narrative would involve the naming of some distinct feature in the landscape, such as a hill of peculiar shape, or some point on the coast or the low stretches of ground which should at once appeal to the memory of his auditors. The ease with which the names of localities are pressed into service, the precise and picturesque epithets he applies to them, such as "lofty," "beetling," "precipitous," "low," and the like, the mention of two rivers furrowing the surface, the position of the various centres of population scattered over it, everything tends to prove that both author and the public he addressed were equally familiar with the sites forming as it were the decoration of the stage on which the piece was acted. To have done this he must either have lived in the Troad or the adjacent districts, within a walking or visiting distance of the Hellespont, over which the ships from Phocæa and Smyrna, from Miletus and Ephesus, sailed to and fro. Quaintness and peculiarities of details in the landscape were not lost upon him, but sank into a mind both receptive and keenly alive to impressions of this kind. The images thus formed are faithfully reflected in his verse, and could not fail to enlist the sympathy of hearers similarly experienced; emphasized, moreover, by vivid colouring, applied with a few broad, cunning touches. Thus perpetual appeal was made to the recollections of the audience, and it was necessary that its testimony should be in unison with those of the poet. Accordingly, in what may be called the descriptive part of the *Iliad*, we ought to find the general characteristics of the Trojan plain, and such peculiarities and leading lines in the landscape as are likely to at once strike the traveller.

The fundamental data of the *Iliad*, and the whole cycle connected with it, take for granted another real element: namely, that long before these poems came into being, there existed somewhere in this plain a lofty citadel with beetling crags, ruling it far and wide; that it was taken after a long siege; that the remembrance of this event and its natural consequences were still fresh enough in the minds of the people to induce poets to seek on this spot subjects for lays that should gratify the pride of the Greeks holding the coast, and flatter the vanity of their princes as well. We are inclined therefore to hold that, on some point not far removed from the entrance to the straits, close to the confluence of the Scamander and Simoïs,

there stood a city called Troy by Homer ; which after a longer or shorter resistance succumbed to the repeated attacks of besiegers that had come from Hellas proper. But it does by no means follow its having been a large place, capable of harbouring thousands of auxiliaries within its walls, or that the sustained efforts of united Greece were required to subdue it. The favourite pastime of Epic poetry throughout the heroic period was the singing of Troy with its succouring and besieging hosts ; in their hands it assumed the proportions of a great centre ; in reality it was a hamlet rudely fortified, which a handful of men could easily overthrow.

Having gone over the positive data which higher criticism may hope to excogitate from the narrative of the *Iliad*, it remains to determine how far these data suit the position and the ruins of Hissarlik, or if they would better harmonize with some other spot in this district, around which are remains of unquestionable antiquity. A place with a fortress before whose walls were fought so many battles, must have left traces of its existence, and if so they could not long elude the curiosity of modern explorers, and the spade, sooner or later, was sure to bring them to light. As a matter of fact, Dr. Schliemann has explored every ancient site in the Troad, and, with his assistants, has subjected the site of Troy to an exhaustive examination.

The men of old, whether in Greece or Italy, invariably selected a naturally strong position for the site of their towns, which a little artificial help would complete. Was life, in those distant days, less precarious, less exposed to perpetual attacks in this corner of the world than anywhere else ? That in this it followed the universal rule and was a town seated on a height, is implied by the epithets used by Homer in describing Troy and Pergamus, its acropolis.

The poet has no passing allusion to hills which the Greeks would have had to turn in order to reach the walls of the city ; accordingly it would be vain to seek for Troy in one or other of the side valleys of the plain, such as those of the Dumbrek-su or Kemar-su. The only obstacle between the citadel and the ships of the allies seems to have been the Scamander ; but this could not be very great, since we constantly hear of its being forded by combatants and messengers alike, on their way to the camp and the city to and fro. The arena where all the

fighting takes place is between these two points, and there should be no difficulty in finding its situation on the ground, for the river divided it into two sections; it must be spacious enough to allow of the flux and reflux of the troops engaged in the battle, yet narrow enough to have been crossed and re-crossed several times during the day. Nor is this all: we read in the fifth canto of the *Iliad* that Hera and Athene alight in the meadow from the chariot that has brought them from Olympus, close to the confluence of two streams, the Scamander and Simoïs. From this place they set out on foot towards the armies to join in the affray: it is self-evident, therefore, that the distance to be traversed to reach the battle-field was not great.¹

There is yet another peculiarity which examination of the ground ought to disclose to us, could we expect to find perfect coincidence between its ancient state and that which it has at the present day. We allude to the springs, one hot and the other cold, said to have bubbled up outside the town in front of the Scæan Gates;² thither, before the siege, the Trojan women were wont to go in order that they might fill their pitchers or wash their bright clothes. Near this spring was accomplished the last act of the drama, the overthrow of Hector by Achylles.

Little or nothing is to be made out of the information relating to a swamp in which Odysseus and his companions lay in ambush among bulrushes;³ morasses there must have been then as now, in a plain which, owing to its very slight incline, is easily turned into a vast lake after the rains. These waters after the floods are very sluggish, and linger in the disused arms of the river, until they meet near to the sea-shore a high sandy bank, which the north wind moves and impels along (Fig. 60).

Having now passed in review the conditions as to the situation which any proposed site for Troy should satisfy, it remains to examine how far those that have been put forward harmonize with the main data of the programme. The hills which, each in turn, have been named as the probable site in question are Hissarlik, Tshiblak, Akshi Kioi, and Bunarbashi, to enumerate them as they present themselves as you enter the valley of the Scamander from the sea.

¹ *Iliad*.² *Ibid*.³ *Odyssey*.

The position of Hissarlik and the ruins it carries have been amply described; hence there is no occasion for going into any great detail for the present. It is hard to grasp how Tshiblak could ever have entered into the debate. The village rises on the slope of the plateau, some three kilometres from the Scamander, its back is turned to the sea, *e.g.* to the north, and from it a side view only of the valley can be obtained. A town situated at this point could only have been approached by climbing steeply slopes, for which there is no authority in the



FIG. 60.—View of the plain, west of Hissarlik

narrative of the Epic, where the battles are described as perpetually surging from the plain up to the walls of the beleaguered city. We may, then, rule Tshiblak out of court.¹

¹ Dr. E. D. CLARKE (*Travels in Various Countries of Europe, Asia, and Africa*, London 1812), and after him P. BARKER WEBB (*Topographie de la Troade*, Paris 1844), tried to show that the Homeric city had been in the neighbourhood of Tshiblak. In looking over my notes (July 1856), taken during my first visit to the Troad, I find the following: "Webb places Troy south-east of Tshiblak Kioi, at a point which on his map looks like an isolated hill. It is not so in reality; the plateau is connected with that of Novum Ilium by slightly undulated ground,

By following the course of the Mendere, in a south-eastern direction, a good hour's walk will take the visitor to M. Calvert's beautiful farm in the district of Akshi Kioi, where travellers from all parts of the world have at one time or another enjoyed the hospitality of its owner. The ridge bearing Akshi Kioi has its foot washed by the Kemar-su, an affluent of the Mendere; this village has been identified by some both as Homeric Troy and the village of the Ilians, Ἰλίων κώμη, of which Demetrius Scepsis wrote that it had superseded the town sacked by the Greeks.¹ The objection which might be raised as to its distance from the Hellespont being far greater than what may be conceded for it, is rendered nugatory by the late excavations, which have definitely settled the question. The hypothesis suggested by the character of the buildings and other ancient remains found on the farm and another ancient site at Hanai Tepeh,² about five hundred yards distant, has been fully confirmed by inscriptions discovered on these same sites. The stream which here falls into the Scamander is not the Simois, but the Thimbrius, mentioned by several ancient writers in connection with the town of Thymbra and the temple of Apollo Thymbræus, as having stood near the point of junction of these two rivers.³ Strabo places Ilium fifty stadia from Thymbra; this distance, equivalent to 9,250 metres, does not coincide with that of the map measured in a straight line, but is very nearly that of the road, which follows the sinuosities of the hills.

making it difficult to fix upon the precise spot meant by Webb for the site of Troy. Assuredly the city had an acropolis; now this, in the Homeric age, was the essential part, when not the whole of the town. Again, frequent mention is made in the *Iliad* to the Trojan fortress, to which the poet applies the peculiar name of Pergamus; Hector and the Trojan women are said to ascend to the citadel. But he would be clever indeed who could point out on this wide and even platform, I will not say a hill, but an eminence of any sort, whereon to put the Homeric Pergamus."

¹ Among the upholders of this theory cited by Schliemann are RENNELL (*Observations on the Topography of the Plain of Troy*, London 1814) and H. N. ULRICH (Rheinisches Museum). On the Ἰλίων κώμη, see STRABO.

² SCHLIEHMANN, *Ilios*, pp. 106, 107, Appendix VIII., *Thymbra, Hanai Tepeh*, by F. CALVERT. Two fragments of inscription appear to have belonged, one to an inventory of the property owned by the temple, and the other to a list of the winners in the sacred games celebrated around the sanctuary (LEBAS-WADDINGTON, *Voyage archéologique*, Part 5, 1743 d, 1743 l).

³ HOMER; STRABO.

Having disposed of Tshiblak and Akshi Kioi—ancient Thymbra—neither of which ever had the ghost of a chance, we are left to choose between those who would place Troy near the village of Bunarbashi, and those who, following ancient tradition, recognize it in the Græco-Roman Ilium, and look on Hissarlik as the probable site which encloses its remains.



FIG. 61.—Physical map of the Troad.

Bunarbashi lies about three English miles south of Akshi Kioi, some little way beyond the farther bank of the Mendere; its white minaret is seen at a distance, and warns the traveller that he has before him a Turkish village. Its huts nestle on the northern slope of a rocky height known as the Bali Dagħ, and at its foot, within a narrow area, bubble up numerous springs,

from which the hamlet of Bunarbashi, "head of fountains,"¹ takes its name. They form a vast morass of running water, broken by patches of wood, walnut and willow trees of luxuriant foliage, with here and there cresses and canes, alive with the warble of birds of many kinds. Presently the plain dips, and all these rills gather themselves into one stream, which flows across the plain almost parallel to the Scamander, with which it formerly mingled its water close to the coast, until a Turkish bey bethought him of diverting its course through his property, and thence to the Ægean, into which it falls, a little to the southward of Ieni Kioi (Fig. 61).

The slope of the height behind the village, though steep, may be climbed without much difficulty; but the east and south-east, besides being precipitous, are washed by the Mendere ere it enters a narrow gorge with perpendicular walls. Half-an-hour's walk—or rather climb—will take the traveller to the rim of these precipitous rocks, supporting a first natural esplanade; but beyond a pair of tumuli it betrays no trace of the sojourn of man, though level enough and spacious enough to have carried houses. Proceeding further south, the ridge first rises, then sinks to rise again, and some two hundred paces higher up stretches out the second or upper platform, where the rocky mass appears to have been carefully levelled out, so as to supply erections with a firm footing.

Among confused vestiges of habitations, a rampart has been traced on many points along the brink of the ravine, and is by far the most interesting relic to be seen here. It still preserves from two to four courses.

According to Lechevalier's theory, the lower plateau having the twin tumuli would be the site of Troy, with the Scæan Gates a little above the springs; whilst the upper esplanade would represent the citadel surrounded by the wall just referred to.² That Lechevalier was a poor observer is evident, for he never suspected the existence of the upper rampart, which would have

¹ Schliemann counted thirty-two springs. The Turks call the site where they bubble forth *kirk gheus*, that is to say, "forty eyes," and probably, adds the explorer, there are forty or more.

² The architect Mauduit, to my knowledge, was the first who pointed out and made drawings of these ruins, which he published with a text and maps in 1840, under the title of *Découvertes en Troade*.

been of material assistance to him in working out his theory. He asserted that the two springs mentioned by Homer—one lukewarm, the other cold—are to be seen at the foot of the village. But instead of two springs we have forty, and all have a mean temperature of sixteen to seventeen degrees Centigrade. Although his assertion was purely gratuitous, and the creation of his own fertile brain, his theory went on flourishing, and at the beginning of this century was almost universally accepted by historians and critics; some of whom have obdurately refused to relinquish their position, even after the discoveries that have been made at Hissarlik.¹ In justice to the defenders of this theory, it must be confessed that on the first blush many points about Bunarbashi seem to suit in a remarkable manner the site of ancient Troy: copious springs of fresh water jet forth in front of its houses staged on the spurs of the mountain; in its rear was a citadel which the ravine covered on two of its sides; whilst on the remaining faces the ascent was so long and arduous, as to enable the defenders from their vantage-ground to check the enemy's advance. A fellow wall to that of the Bali Dagħ rises on the other side of the ravine; it is locally known as Eski Hissarlik, "ancient fortress," because it closely resembles the so-called rampart of Pergamus. The two castles guarded the pass against invaders who should descend the mountains along the course of the Scamander on their way to the coast.

The felicitous choice of its situation was extolled to the skies; victory seemed assured to the expounders of the theory, when a military authority (von Moltke) declared, that if Troy had ever existed, it could only have been erected on the Bali Dagħ. However fair and sound the reasoning may look on the surface, it will not stand the test of facts as revealed on the ground. It is self-evident that the several points of the battle-field are at no great distance from each other; since no count is taken of the many journeys made between the city and the encampment, whether by warriors, heralds, or kings; yet a space of over twelve kilometres parts Bunarbashi from the coast, and this distance is increased by two kilometres from the top of the Bali Dagħ.² Let us take the first battle, beginning with the second canto of the *Iliad* and

¹ GUSTAVE D'EICHTHAL, *Le site de Troie selon Lechevalier et selon Schliemann* (*Annuaire de l'Association pour l'encouragement des études grecques en France*, 1874.

² Precisely 12,800 metres.

terminating with the seventh, and see if the extent of the field on which the poet moves his pieces coincides with what we know of Bunarbashi. The incidents are the following. At the break of day, general assembly in the Greek camp;¹ long speech of Agamemnon; dispersion of the troops to put the ships afloat; long speeches of three heroes; preparations for early meal; Agamemnon sacrifices an ox to Zeus; new speech of Nestor, followed by the order to draw up the army in battle-array. These various doings must at the least have extended over four hours; accordingly the sun was already high above the horizon when the troops advance in the plain of the Scamander. They approach so near to the Scæan Gates that their chiefs are recognized by Helen, who tells their names to Priam. Paris challenges Menelaus; Hector and Menelaus deliver speeches, each in turn. Heralds are sent to Troy and to the camp to fetch the victims; these are slain in solemn sacrifice and the single combat takes place. The compact entered into by the contending heroes is broken by treacherous Pandarus, and hostilities are resumed. The Allies drive the Trojans to the very walls of their city, and are repulsed in their turn; they withdraw to the ships, their face turned towards the enemy. The Greeks again advance, and a terrible engagement takes place in the plain between the Scamander and Simoïs. The Greeks again lose ground. Hector returns to Troy; long conversations with Hecuba, Helen, and Andromache. The Allies must again have advanced, since when Hector and Paris issue from the gates, they are suddenly confronted by the Achæans; we now have the speeches of Hector, Menelaus, and Nestor. Night coming on puts an end to the struggle between Hector and Ajax, and the Greeks finally retire to their camp.

Thus the interval between the city and the Greek positions has been traversed at least six times, from nine or ten in the morning to seven or eight in the evening; twice by the herald who fetched the sacrificial lamb, and certainly four times by the army; and all these marches and countermarches could be accomplished despite the enormous length of time taken up by the many speeches, engagements, and single combats. Accordingly, the defenders of Lechevalier's theory are compelled to admit that the army on that eventful day, apart from all the

¹ The above summary is taken from SCHLIEMANN.

fighting and speechifying, found time to walk more than twelve leagues.

We shall receive the same impression by subjecting the rest of the narrative to the like analysis. After the Greeks have taken refuge in their ships, which came so near to being burnt, Hector orders oxen, sheep, and wine to be forthwith brought from the city for his victorious bands, entrenched in the positions which they had just carried.¹ These must have been close to the Greek tents, since the Achæans could overhear the sound of flutes and pipes, and the hum of voices of the Trojan warriors.² Now, had Troy been at Bunarbashi, the distance which separated it from the Trojan encampment would have been about ten kilometres, and the victuals could not have reached their destination before day-break on the following day; whereas we read of their prompt (*καρπαλίμως*) arrival, and that the remainder of the night was spent in banqueting and high junketing.³ Then, too, when Priam undertakes to soften the anger of Peleide, he leaves Troy by night. Hermes ushers him into the tent of Achylles, with whom he shares his evening repast; and having obtained the body of Hector, he snatches a few hours' sleep and rises to depart, reaching the town before sunrise.⁴ Many other instances might be adduced in proof of the short distance implied by the thread of the narrative, between Pergamus and the Greek bivouacs.⁵ Minute and precise calculations are of course out of the question here. A poet may be permitted certain licences, and in crowding more events than could possibly take place in one day, however full we may suppose it to have been, he was not transgressing beyond his legitimate province; but he could not take the same liberties with space as he had done with time. Wilful offence in this direction would have brought about his discomfiture, for his hearers would not have tolerated errors bearing on topography which they knew so well. When, as frequently happens, he throws out a graphic epithet, indicating by a single word where this or that encounter had taken place, his auditors immediately perceive with their mind's eye, one or other of the peculiar spots on the long coast on which they had stranded their ships, or some of the countless mounds which dot the plain, or maybe some bend or opening of the river, or perhaps the foot or the

¹ *Iliad*.² *Ibid.*³ *Ibid.*⁴ *Ibid.*⁵ SCHLIEMANN.

summit of the hill which carried Troy, and this vision presupposes a more or less distinct perception of a relation, a certain evaluation of the space which, on the ground, separated the several points alluded to or named by the speaker. In this way, we may be sure, did the poet suit his tale to the conditions of the surroundings in which his *dramatis personæ* were placed, so that none of his hearers should experience the least difficulty in picturing to themselves from first to last the various acts of the people moving in the drama.

Those who favour the Bali Dagh theory are obliged to acknowledge that its distance from the Hellespont is greater than they could wish; but they think they can wriggle out of the difficulty by appealing to the venerable authority of Herodotus and Strabo; to the effect that the coast has advanced since antiquity, when the sea penetrated far inland, where it had fashioned for itself a great gulf, and that as a consequence of it the Homeric *naustathmos* or naval station was much nearer to Bunarbashi than it is now.¹ Unfortunately for its authors, the hypothesis is not corroborated by history or the features of the landscape. Scylax rightly states that Novum Ilium, that is to say Hissarlik, is twenty-five stadia from the sea; for this is very nearly what we find on the map.² The pretended gulf is supposed to have been filled up by alluvium brought to it by the Scamander between the tenth and the fifth century B.C.; but why should the river have waited until then to roll down a quantity of mud and gravel, for the purpose of discharging it on the coast, where it met the sea-current which henceforward seized and dispersed it far and wide, so as to effectually prevent the spreading of the plain for all time? When man, however, fixed his abode in this district, the Scamander had been flowing for thousands of years, during which it had had ample leisure to accomplish this work. Why should it have been particularly active in the short period which separates Scylax from Homer?

Moreover, researches into the composition of the soil and subsoil of the plain have for ever disposed of the question; the trenches and shafts sunk by Schliemann all over the Troad have disclosed no trace of a marine formation below the alluvium wrenched from the Idæan rocks by the Scamander.³ It would

¹ HERODOTUS; STRABO.

² SCYLAX.

³ VIRCHOW, *Beiträge zur Landeskunde*, &c.

appear to be proved then, that the lower plain of Troy does not cover the ancient bed of a gulf, and that the Asiatic coast at the entrance of the strait preserves, with one single exception, the aspect which it wore twenty or thirty centuries ago.

In front of Cape Sigeum—connected with the inland ranges by low ridges—runs out, to about 1,500 metres, a tongue of sand formed by the Scamander, and above all by the action of the north and north-east winds, which sweep down the strait with great violence during the best part of the year. Its extreme point is crowned by the fortress of Kum Kaleh. Before wind and river had cast up this neck of land which conceals Cape Sigeum from the sea, the coast must have described, somewhat to the rear of its present line, a slightly inward curve, alluded to by the poet when he adverts to the spot where the Greeks beached their boats and established themselves. "They have," he writes, "filled the great mouth of the coast which is fenced in by the two promontories."¹

Nor do the defenders of Bunarbashi fare any better when they endeavour to harmonize their theory with the names and direction of the streams of the Troad, such as we know them from the poem or from subsequent writers. The cumulative evidence derived from these different sources was always understood as establishing the fact that the Scamander was the main river of the country, and that it had its rise on the heights of Ida.² The old name, slightly modified, has survived in that of "Mendere."

On the other hand, Lechevalier rests a main argument on the passage of the Epic wherein reference is made to eddying fountains close to the Scæan Gates, which he would identify with those of Bunarbashi.³ The expression, "whirling, eddying," employed by the poet, though vague, implies that two springs discharge their waters into the Scamander; note the absence of the definite article; they are springs of the Scamander, in the sense that they

¹ *Iliad*—

καὶ πλησαν ἀπάσης
'Ηϊόνης στόμα μακρόν, ὅσον συνεέργαθον ἀκραί.

² *Iliad*; the son of Hector is called Scamandrius, HERODOTUS, STRABO, on the authority of Demetrius Scepsis, who was a native of this corner of the world.

³ *Iliad*—

Κρουνῷ δ' ἵκανον καλλιβρόω, ἔνθα δὲ πηγαὶ
Διοιὰ ἀναΐσσουνσι Σκαμάνδρου δινήεντος.

add to its volume ; but we should strangely force the meaning of these words, if with Lechevalier we were to recognize in them the sources which give rise to the river. The springs of Bunarbashi form now, and never can have formed but a small rivulet, which after a short run used to join the Mendere, before it had its course diverted towards the Ægean. How could a mere rill ever have been magnified into a river, and that river the Scamander, whose name lives on in the Mendere, and is found to water the upper and lower valley of Troy over a space of sixty miles ? Lechevalier now has recourse to an expedient which only a man driven at bay would think of using. Though obliged to admit that the stream called Mendere is the Scamander of Herodotus, of Scephis, of Strabo, and in fact the whole of intelligent antiquity, he maintains that the name of Scamander only applies to the streamlet fed by the springs near Troy, and that the modern Mendere is in reality the Simois. Perplexing contradiction ! According to Lechevalier, the Scamander acquired its importance from the town situate near its rise ; the name was applied to its upper course only, before its confluence with the narrow stream. From this point onward, however, it was known as the Simois. Such were the denominations in the time of Homer ; later on the name of Simois was discarded, and that of Scamander retained from Mount Ida to the Hellespont. With the help of such stratagems Lechevalier succeeds in ferreting out, in the immediate vicinity of Bunarbashi, the two rivers of which he is in need, the Scamander or Xanthos, and the Simois, along with their confluence near the scene of action. To expatiate upon the whimsicality, to give it no harsher name, of such methods would be sheer waste of time. The use or rather the abuse of hypothesis has seldom been carried so far.

Other features might easily be brought forward against the site proposed for Troy. Before his contest with Achilles, Æneas recalls the origin of the Trojan race and of his royal house in the following words : " Then, sacred Ilion did not yet rise in the plain, for our fathers had still their seats on the slopes of Ida abounding in springs." ¹ Can a town be styled as " rising in

¹ *Iliad*—

ἐπεὶ οὕτω Ἰλῖος ἱρὴ
ἐν πεδίῳ πεπόλιστο, πόλις μερόπων ἀνθρώπων,
ἀλλ' εἴθ' ὑπωρείας φέκον πολυπίδακος Ἰῆης.

the plain," when its acropolis is some 142 metres above the sea, and its houses are perched one above the other on the flanks of a lofty hill, which leans against a much loftier mass? The plain here clearly refers to the lower valley, widening out as it approaches the sea.

Then, too, one who has bent over the frowning precipices of the Bali Dagħ will never dream of placing on this spot the scene preceding the fateful combat between Hector and Achylles, or imagine that the latter could chase the Trojan hero thrice round the walls of the city.¹ This reluctance on our part would have been shared by the contemporaries of Homer, who knew the place by heart. The long circuit is not what perplexes us. The imagination can make light and leap over such small trifles; but we feel that once the two heroes had entered the gully, hemmed in by the escarps which strike out far beyond the point reputed to mark the Trojan acropolis, they could never have been able to climb these precipitous sides. However complacently the imagination may lend itself to be deceived in order that it may be amused, its enjoyment would be spoiled were its sense of probability outraged.

The poet needed no effort to harmonize with reality allusions to physical objects which we find scattered up and down in his tales. His word-painting is admirable; distinctive qualities in the landscape as had struck him in his wanderings, were recalled and made to live by an apposite word thrown out from his rich store; hence any allusions, even the slightest, to topographical data are of inestimable value, and deserve our serious consideration. Here are two that will by no means coincide with Lechevalier's theory:—Homer represents Zeus as looking down from the summit of Ida on the city of Troy and the Grecian ships.² But from Bunarbashi the top of Gargarus and the ships would have been hidden from view by the massive block of

¹ *Iliad*. The poet, it is said, did not intend to make us believe that his heroes could run three times round the town, but that they had raced thrice round a circle in front of the city. The words of the narrative, however, if we refer to them, will not lend themselves to be so twisted. Achylles is described as keeping close to the wall to prevent Hector approaching it and having the gate opened to him by his friends stationed on the rampart.

² *Iliad*—

αὐτός (Ζεὺς) δ' ἐν κορύφῃσι καθέζετο κύδῃ γαίῳ
εἰσορόων Τρώων τε πόλιν καὶ νῆας Ἀχαιῶν.

the Bali Dagħ. Again, Priam, after having obtained the body of Hector, begs Achylles to grant an armistice of eleven days, that he may prepare and celebrate his son's funeral, adding—"We are, as thou knowest, shut up in the city by the siege, and wood for the pyre has to be fetched afar from the mountains; and the Trojans are terribly scared [by this war]."¹ Would the old king have thus spoken if Troy had been at Bunarbashi, whose heights are connected with a wooded mountain range (Ida), whence the Trojans could quietly have fetched as much wood as they required, without asking anybody's leave, or being troubled by the Greeks on the shore?

The poem by itself is not sufficient evidence in a contention of this nature; literary documents seldom are; for though helpful in throwing out useful hints, they are necessarily fragmentary, often immature and doubtful, so that it would be unsafe to trust to them alone; reference to the results of the excavations should, if possible, be made in every instance before coming to a final conclusion. These results, needless to say, are deadly against the hypothesis under notice.²

Lechevalier makes much of the fact that on the Bali Dagħ are several tumuli, which he would identify with the *τύμβοι* or funereal mounds of the *Iliad*, in which the Trojan heroes were buried. Of these the largest, which Lechevalier christened the Tomb of Hector, because of its size, was opened by Sir John Lubbock in 1872; but neither bones nor even ashes were found in the vault; whilst the broken pottery collected around it was painted, and seemingly not older than the third century B.C. The excavations of Von Hahn in 1864 and Schliemann in 1868, on and around the Bali Dagħ, were without results. Despite their zealous search, no old pottery, or brick, or even freestone, which might point to an important settlement on this spot in remote antiquity, was discovered. Towards the summit, however, they brought to light the ruins of a small acropolis, in length about 200 metres by 100 metres. The mode of building exhibited in these walls is not uniform throughout; thus some of the blocks are of considerable size and roughly squared,

¹ *Iliad*—

Οἶσθα γὰρ, ὥς κατὰ ἄστυ ἐέλμεθα, τήλοθι δ' ὕλη
ἀξέμεν ἐξ ὄρεος· μάλα δὲ Τρῶες δεδίασιν.

² SCHLIEMANN, *Ilios*.

the gaps between them being filled with smaller units (Fig. 62). A little further we come upon more regular masonry, but the interstices are still made good with pebbles (Fig. 63), whilst elsewhere there is a marked tendency to horizontal beds. The



FIG. 62.—Wall on the Bali Dagh.

stones are about forty centimetres in length and fifteen centimetres in height. As a rule, each successive course is set back from the one immediately below (Fig. 64). Are we to recognize in these walls the outcome of two distinct epochs, or a mere difference of execution sufficiently accounted for by the assumption that



FIG. 63.—Wall on the Bali Dagh.

two sets of workmen were employed, and that each worked after its own habitual fashion? To this question no satisfactory answer can be given. Irregular masonry is not sufficient evidence for fixing the date of a wall; both Greece and Italy offer numerous examples of polygonal masonry long after the

adoption of a more regular mode of building. Besides, according to Virchow and Sayce, the stones look as if they had been cut with an iron implement.¹ Now iron was not so used in Homeric times, and much less in the more distant age when Troy was built. More significant still is the thinness of the wall, which is only one stone deep; whether it served as substructure to crude brick or not is of no consequence, and cannot for a moment compare with the massive rampart of Hissarlik; and it is paying the Olympians a poor compliment to imagine that they had a hand in constructing so indifferent and flimsy an enclosure.² That the establishment was unimportant and of short duration is further proved by the fact that, both within the stronghold and what may be termed the lower town, the rock was struck at one metre, and rarely though never

FIG. 64.—Wall on the Bali Dagh.

above, one metre and a half below the surface. Out of the potsherds lying on the top of the layer of rubbish were bits of pottery of about the fifth century B.C.; below this were collected fragments of ill-baked, grey earthenware, cast on the wheel, and akin to that which at Hissarlik, Schliemann supposed to be synchronous with the last Lydian dynasty.³ Stone implements, rude idols, and whorls of terra-cotta, found in such profusion amidst the ruins of old sites, are conspicuously absent here; whilst the virgin soil lying on the surface shows no trace of houses having stood between Bunarbashi and the

¹ SAYCE, *Notes from Journeys in the Troad, &c.*, pp. 76, 77 (*Hellenic Journal*, 1880). The article opens with a lucid exposition as to the claims of Hissarlik to be considered as the site of Troy.

² *Iliad*.

³ STRABO.

Bali Dagħ. Accordingly, what we are willing to concede is the existence of a small town, situate a little above the village of Bunarbashi; its fine springs close by must always have attracted folk to settle in their neighbourhood. These ruins, writes Schlie-mann, probably mark the site of Gergis, a fortified place which, from the beginning of the fifth century B.C., was successively found in the possession of a Dardanian prince, Zenis by name, and vassal of Pharnabazus, then of his Queen Mania and her son-in-law, Meidias. Xenophon, from whom we gather these particulars, adds further on that Gergis finally fell to Dercyllidas.¹ Again, neither the hydrography of the Bali Dagħ nor the position of its ruins are of a nature to suit the notion which the poet seems to have formed of the general appearance of Troy. The palaces, whether of Priam, Hector, or Paris, the place of assembly where the Trojans were wont to gather together in front of the houses of their princes, the temples of Apollo and Athene, are all found on Pergamus or in the upper city, ἐν πόλει ἄκρῃ, for with Homer these terms are synonymous; his heroes are constantly moving from the Scæan Gates to what he calls Pergamus or upper city indifferently, and, as stated above, the distance which intervenes between these two points is over two kilometres. It is hard to admit that so great a distance separated the royal mansions from the springs which supplied water to a large household of princes and troops of attendants. These and other observations bring out the fact that neither the information furnished by the Epic, nor the survey of the ground, nor the results of the excavations, make for Lechevalier's hypothesis; we have found no reason throughout our research for believing that the Bali Dagħ marks the site of a fortified place, whose importance, size, and wealth were great enough to have impressed the popular fancy, which had not only preserved floating reminiscences in respect to it, but added to their bulk from age to age. Quite different is the case of Hissarlik. There the explorer is rewarded by an enormous accumulation of débris wonderful to behold. From the lower strata of the artificial mound he picks up objects of varying interest, but which one and all carry thought to the very beginnings of human industry, so that we seem to be present at the rise of the earliest societies which constituted themselves in that

¹ XENOPHON, *Hellen*.

corner of the world. As his eye follows the apparently unbroken march of progress, from the bottom of the trenches up to the present level, he comes to the conclusion that this hill, from a time immeasurably older than history, was never left long desolate; whereas it is impossible to carry the Bali Dagħ beyond the eighth or ninth century B.C. Again, at Hissarlik, although the enclosure is not what may be called Cyclopæan, it nevertheless is a standing witness to a mighty effort on the part of the constructors. As to the myth relating to the origin of this same rampart, it may have arisen after the fall and burning of the place, when the substructures having been laid bare, a simple and admiring population ascribed them to the joint effort of Apollo and Poseidon.

If these be indeed the walls wherein the early Æolian bards thought to descry the still living impress of the august hands that had heaped up the stones, the relation of the citadel to the lower town coincides in a remarkable degree with the Homeric narrative. Pergamus is a mound of fifteen to sixteen metres in height, situate at the north extremity of the plateau. It has all the essentials of an acropolis; slopes lead up to it, and it is surrounded by walls. The ancient town spread around it and stretched below, perhaps to the border of the plain. The temples of the gods and houses of the princes rose on the esplanade, and were strongly entrenched behind the massive enclosure. When the chiefs wish to summon the people and impart their will to them, a herald calls out from the top of the rampart, and his voice is heard everywhere and promptly obeyed. In a few minutes posterns and stairs, broad ramps leading to the principal entrances, all are thronged with armed men ready to march, with matrons who will presently bring offerings by which they hope to appease the anger of the gods.

The distance of 5000 metres which now parts the sea from the foot of Hissarlik, may have been a trifle less in antiquity, ere the neck of land crowned by Kum Kaleh was formed. If Hissarlik represents Troy, the fact that Greek and Trojan troops, messengers, and heroes were able to traverse daily more than once a space of barely three English miles, ceases to have anything very wonderful in it. With a horse the ground could be covered at a single gallop; the various points were so close to one another as to enable the eye to take

them all in at a single glance; the mind therefore would scarcely be conscious of the time required to go from one spot to another.

The reticence of the poet on this head would have no disturbing effect on people who were familiar with the scene of action, and who could follow the various incidents which he describes, the chasing of Hector around the walls by Achilles, for instance. True, in order to do this the two champions had thrice to climb the slope which connects the plain with the plateau; but the feat, though above what average humanity might be expected to perform, did not outstrip the bounds of possibility, or at least what the imagination of poet and auditors alike were ready to concede to heroes of by-gone days, held to be far superior in strength and agility to the men of their own generation.

The same holds good in regard to minor points: we have said that whilst they cannot be reconciled with Lechevalier's view, they fit and strengthen Schliemann's position at every turn. We have proved beyond cavil that on the clearest day all that the "father of gods and men" would have been able to descry from the top of Gargarus, even though supplied with a powerful telescope, would have been the slender outline of its white ramparts and buildings; from that height all the rest would have merged and have been confounded with the plain. Then, too, if it would be vain to seek the two Homeric rivers at Bunarbashi, they are easily recognizable at Hissarlik. The Dumbrek-su is as certainly the ancient Simoïs, as the Mendere is the Scamander.

Its ancient bed has been traced to a kind of ditch, which branches out from its present course below Hanaï Tepeh, and which now only fills after heavy rains; it then gathers itself into a stream and reaches the sea by several channels, the largest of which, the In-Tepeh-Asmak, doubtless corresponds with its old principal estuary (Fig. 33). Had the course of the Homeric Scamander been in a western instead of an eastern direction, as it is now, it would not have barred the way to people going from the camp to the city, to and fro; whereas when Priam repairs to the tent of Achilles, the poet shows him stopping at the ford to water his horses before crossing over.¹ Though

¹ *Iliad*.

charioteers were obliged to look out for an opening in the "high-banked" river, foot passengers found no difficulty in crossing the stream almost everywhere; for except after heavy rains, the water is never above knee-deep, whilst the current is almost dry in its lower course. The silence of the poet is easily accounted for on that best of reasons: there was so very little to tell people who were supposed to know as much as he himself did. But incidentally, as it were, in reality because the dramatic situation required it, we discover that the Scamander flowed near the spot where the two armies met. This we learn, in the fine episode relating to the engagement that took place on its banks and in its very bed; when the Scamander, aided by the Simoïs, like a summer storm suddenly rises in his anger and mightily strives to arrest and drown the son of Peleus.¹ The part played by the Simoïs in this incident is such as would befit a simple affluent of the principal river of the country. The Scamander takes the leading part; he it is who begins the strife, and long bears the whole burden on his shoulders; he waits to the very last moment before he shouts to the Simoïs, when the obstinate resistance of Peleide makes the issue of the battle doubtful. That the twin rivers mingled their currents close to the scene of action is self-evident; how else are we to understand the Simoïs having heard the call of his brother stream? Their junction must then have been in that low stretch of ground immediately in front of the town, which at that time was watered by the many arms of the Scamander, but is now covered by a vast morass, into which the Dumbrek-su loses itself. The spot would thus be at the extreme limit of the battle-field, but close to it, "in the green meadow, near the meeting of the two rivers," where Hera and Athene unharness their horses and leave the chariot to join the army and instil fresh courage into the dispirited Greeks, whom the Trojans are pursuing in every direction.

On the other hand, the two fountains, of different temperatures, are equally to seek at Hissarlik and Bunarbashi. Yet we are loth to believe that they are mere fabrications of the poet. To have aroused the interest of his auditors by simple mention of them, the springs must have recalled a natural feature familiar to them all. Had nothing of the sort ever met their gaze, the

¹ *Iliad*.

unusual phenomenon, far from helping them to localize the scene of the combat, would have bewildered and sorely put them out. May not the poet however, in order to embellish his tale, have transferred under the walls of Troy a physical characteristic to be found on some other point of the Troad, or did the two springs really eddy forth at the foot of the ramparts? This last conjecture is by far the most likely. Accordingly, it is just possible that the Homeric sources are now covered by and flow under the morass extending to the northward of the plain, referred to above; or they may be represented by the reservoir and the conduits which Schliemann cleared out. This hypothesis would bring the fountains within easy reach of the domestic abodes; whereas the distance between the top of the Bali Dagh, or more strictly speaking from the



FIG. 65.—Plan of subterranean watercourse.

fortress above Bunarbashi and the washing-trough, would have been considerably longer and more difficult to climb. But at Hissarlik the spade has uncovered a watercourse, which at the end of the gallery was found to branch off into two different directions. The work appears to have been executed long after Homer, and the builders of that day diverted the twin springs into these different conduits (Fig. 65); whilst Bunarbashi, as already pointed out, rejoices in a multitude of springs. True, at the present day the contrast which struck the contemporaries of Homer between the sister fountains is no longer observable; but examples of thermal waters having suddenly dried up are by no means rare; nor, all things considered, would it be wonderful for such a change to have occurred here; at any rate if the change did take place, it certainly was before the classical age; for had there existed during the Macedonian and Roman epoch a warm spring near Ilium, over which floated

the white clouds alluded to by Homer, we should have heard of it, in the same way as we have heard of the lyre which once belonged to Paris, and of the chess-board of Palamides.¹

This particular passage then will not serve our purpose, and must be left out of account, inasmuch as it bears upon a phenomenon which has wholly disappeared. The presumptions, however, which make for Hissarlik as the probable site of Homeric Troy, are strong enough to determine our choice in favour of it. There must the city be sought. The ruins uncovered by Schliemann represent the Troy whose siege and fall hold so large, so abiding a place in Greek poetry; whose name and tragic fate have been echoed in the poetic effusions of every cultured nation.² It only remains to define the meaning of this affirmation. Out of the several groups that succeeded each other on the fortress-hill, which of them gave proof of greater technical skill, or was influential enough to have left so lasting a memory of itself in the minds of men? Assuredly not the earliest, whose erections rest upon the rock, and whose appliances were of the most rudimentary character, whilst the

¹ POLEMON, *Fragm. Hist. Græc.*, ed. C. Müller.

² In some notes (*Excursion à Troie et aux sources du Mendèrt*, in *Annuaire de l'Association*, &c., 1874, p. 58) which appeared at the end of a Memoir by M. G. D'EICHTHAL (*Le site de Troie selon Lechevalier ou selon M. Schliemann*) we expressed a different opinion, or rather sided with Lechevalier's theory. The notes, as will appear, were written long before Schliemann began to excavate. In 1882, however, our professional duties made it necessary that we should go into the question, and the result was a complete change in our views. We pointed out at the same time that all was not as yet proved, and that many difficulties were still in the way. These, for the most part, have been met by the late excavations, conducted by Dörpfeld. Out of the many works and articles dealing with the site of Troy, that written by Prof. Jebb: I. "The Ruins of Hissarlik"; II. "Their Relation to the *Iliad*" (*Journal of Hellenic Studies*, t. iii. p. 185), will be found of peculiar interest. Criticizing certain assertions put forth by Schliemann, and his tendency to insist on finding in the ruins of Hissarlik every detail, even the slightest, of the Homeric topography, the Professor admits that the balance of evidence weighs rather towards the side of Hissarlik, and that the poet of the Trojan legend had this site in view rather than that of Bunarbashi; but he points out certain physical qualities mentioned in the poem which would better suit Bunarbashi. In his estimation the Homeric landscape is eclectic; the poets sometimes appear to imagine a Troy far removed from the sea-shore. The reasons he adduces in support of his thesis are plausible, and evince great ingenuity; but they fail to convince us. We are loth to believe that popular imagination did not fix on some spot around which it gathered the stories told of this siege and of its many battles.

space it enclosed for building purposes was of the narrowest. Besides, the layers of vegetable earth covering the ruins of its primitive habitations are deep enough to lead to the conclusion that this group lived and died in very far-off days indeed. That the site was long abandoned is proved from the fact that no remembrance of this population survived its extinction. The case is quite different with what we have called the second city. We know not how far the houses extended in the plain; but the citadel, with the buildings it contained, has been completely cleared of the rubbish beneath which it lay buried. The height and thickness of its walls, the amplitude of its buildings, the variety and profusion of objects that were collected in the soil and ruin, the already considerable quantity of copper, bronze, silver, and gold that make their appearance here, everything conveys the notion of a populous city, whose inhabitants were both warlike and industrious, a tribe which husbandry, traffic, and piracy had sufficiently enriched to enable it to import such commodities as the country lacked. The ruins of Hissarlik find no parallel in the Troad; on no other point are there evidences of so long and vigorous an effort. Reference has been made to the ramparts and portals, to the princely abodes on the acropolis rebuilt several times, and pointing to three distinct periods in the life of the city. Of course it is impossible for us to name, even approximately, a figure as to the duration of any of them; but as nothing indicates the occurrence of one of those disasters which leave nothing after them but ruin and desolation, the successive reconstructions are sufficiently accounted for by the natural development of the population settled here, and the need for more space, whilst noticeable throughout is the advance which time had brought to the art of the builder. In an age when the condition of societies was much less prone to change than it is now-a-days, these several changes presuppose centuries, in the life of this small state, of uninterrupted prosperity, during which it played a foremost part in the Troad. Entrenched behind its strong citadel, it could command the trade-routes both by land and sea, whilst the city became the emporium of this part of the world. Among the highways which, from the elevated plateaux of Cappadocia and Phrygia, descended towards the west, more than one must have converged to a point where the coasts

of Europe and Asia look at each other across the Hellespont, which here has more the air of a broad river than an arm of the sea, and which in calm weather may be traversed in a fishing-craft, a simple canoe or rafter.

No matter how primitive we may imagine navigation to have been at that early date, it could not but have opened up relations between the mainland and the outlying islands bounding their horizon; behind which were others speckling the bosom of the vast liquid plain. Long before the Phœnicians found out the way to these shores, there existed here among all these islands an active coasting trade, chiefly carried on for the benefit of Troy. On the spot where, later, Homer will run aground the hollow ships of the Hellenes, were beached the boats of Troy and those of her many allies. If coasters were foolhardy enough to venture in these sounds without having previously made friends with the inhabitants, they did so at their risk and peril; in the security afforded by the strong walls of Pergamus, the leaders of a sea brigandage everywhere rife on these coasts could laugh to scorn complaints made against their unceremonious proceedings.

Between the broken lines of this lost history, represented by the ruins of the second city, we can discern points coinciding with the traditions which the Greek epic has preserved; in it we read of a city whose ships sail far and wide, to the distant shores of Peloponnesus, that they may kidnap its fair women; then later on of its having to sustain a long siege, and its final overthrow because of a particular rape. As we tumble about the accumulation of débris which contain the remains of the burnt city, Virgil's picturesque verse, expressive of the fateful night of Troy, comes up to the mind—

. . . omnis humo fumat Neptunia Troja.

The aspect which this city offered after the disaster must have been very similar to that of the "burnt town" excavated by Schliemann at Hissarlik. We have said in another place that irrefragable indications exist on the ground as to a village having been erected on the ancient site of the second settlement soon after its fall; and that the new settlers utilized what remained of the old walls, and entrenched themselves behind them. Does not this indirectly confirm the floating rumours current in the Greek world, according to which part of the old population was

said to have rallied around their native princes, and returned to fix their abode in their former seat soon after the catastrophe?¹ Lastly, in the bed of potsherds which rests on the ruins caused by the conflagration was exhumed an erection of some importance, built of cut stones, and altogether exhibiting a finer style of architecture than its fellows. It is not unlikely that we have here the old temple of Ilian Athene mentioned by Strabo, and if so, is that not one more point in favour of the hypothesis which would place on this spot the Homeric Pergamus, the citadel of Troy? This local and abiding worship, whatever its primitive form, was a powerful factor in fixing and perpetuating in the land current legends connected with it; they formed the nucleus of the vast poetical cycle of which the *Iliad* is but an episode. Accordingly, we are willing to believe that when Homer sang of the anger of Peleide and the home return of the heroes, there existed on the mound of Hissarlik a fortified hamlet around which hovered the names of Pergamus, Ilium, and Troy; but that several stages of superimposed houses already covered the foundations of the buildings of the ancient town, the fame of which still lingered in the memory of the natives. As to the lofty, massive walls which the spade of Schliemann has brought to light, it is probable that they still protruded their tops above the accumulated earth beneath which their base was then already hidden. Though imperfect, they were likely to be taken as stupendous works of art by the simple native folk, and give colouring to exaggerations and fictions invented on the spot, in order to account why a community, whose monuments even in their decay testified to no mean influence on the part of their owners, should have fallen from its high estate. It may well be that the vague memories left by this power, along with its tragic end, were confounded with struggles of a more recent date; the invasion of Æolian colonists, for example, who, led by Achæan chiefs, met with a stout resistance on landing in the Troad. Then had taken place those deadly encounters on the banks of the Scamander between the Phrygian or Mysian tribe—which till then had been in peaceful possession of the land—and the invaders; and when obliged to give up the fertile plain to the new-comers, it had entrenched itself behind what still existed of the defences of the dismantled citadel, and had been reduced

¹ *Iliad*. Cf. STRABO.

after a long siege, in which the ancestors of the Homeric princes ruling the cities of Asiatic Hellas had borne so brilliant a part.¹ The desire to celebrate these exploits had inspired the bards whose collective work is summed up, for us at least, in the *Iliad*; but with their innate though simple feeling for art, which even then characterized them, they borrowed from local traditions certain features which opened up their horizon and widened the scene on which their figures disport themselves at greater ease, and stand out in bolder relief. This would account for the fact of Troy having assumed such important proportions, and also why Priam, though sacrificing to the gods whom Nestor and Agamemnon propitiate, is distinct from Greek kings by certain sides of an Oriental monarch. Does not his very special figure reflect the picture of a distant and mysterious past, when a dynasty around which was cast the halo of gold held sway over the upper and lower valleys of Ida, long before Æolian colonists appeared in the Troad?

We cannot take leave of Troy without touching, as briefly as possible, upon a theory diametrically opposed to that espoused by Schliemann and Dörpfeld in regard to the ruins which we have even now surveyed. We allude to E. Boetticher, a retired artillery officer, who spent his leisure in perusing Schliemann's works, and who since 1883 has expressed his opinions in the daily press and other publications, to the effect that the "so-called citadel of Hissarlik"² is no more than a necropolis containing the ashes of the dead; that the different layers of ruin and soil which have

¹ In this ingenious and highly probable hypothesis, we but follow E. CURTIUS, *Greek History*.

² BOETTICHER's early articles appeared in the *Ausland*, 1883, Nos. 51, 52: *Schliemann's Troja, eine urzeitliche Feuer-Nekropole*. A longer paper was soon after published in the *Zeitschrift für Museologie, &c.*, 1884, No. 21: *Tiryns und Hissarlik als Feuernecropolen von terrasiertem Aufbau*. Later on he contributed on the same subject a number of papers for the Louvain *Muséon*, 1888-1889, which he also brought out in book form, written in indifferent French, that being the language he had originally used for the Louvain publication, entitled: *La Troie de Schliemann, une nécropole à la manière assyro-babylonienne*, with preface by C. de Harley. Meanwhile his pen was busy addressing the scholars of every part of Europe; five of his missives, written about this time, are under my eyes as I write, including his last work, which he has brought out since his journey to Troy. They are severally entitled: *Sendschreiben im Kampfe um Ilion*; *Hissarlik wie es ist, fünftes Sendschreiben ueber Schliemann's Troja, &c.*; *Als Handschrift gedruckt im Selbstverlage des Verfassers*, 1890.

gradually raised the hillock to its present height are not remains of domestic abodes and deposits left by successive generations, but the result of sepultures heaped up on this narrow space, along with the débris of materials used in the accomplishment of funereal rites. The palaces and buildings which figure in Schliemann's plan are but a species of mortuary chapels, in which the bodies were burnt and their remains kept. Those vases whereon the human figure is roughly suggested, served to preserve the bones of the dead; declaring, moreover, that they are only rude imitations of Egyptian canopi. As to the ashes and charcoal found in the potsherds, they had all come out of thousands upon thousands of funereal pyres; whilst the so-called ramparts of the fortress were retaining walls pure and simple, intended to carry the esplanades upon which the fires destined to consume the bodies were lit. Similarly, the city gates were but passages and corridors distributed on the several faces so as to facilitate access to the esplanades, and afford easy circulation in the various parts of the building. The town belonging to this necropolis lay in the plain, on either side of the Scamander, and may have extended to the sea; its acropolis rose on one of the many heights which overhang Hellespont, somewhere between the Dumbrek valley and Cape Rhæteum.¹ We shall not discuss the position which Boetticher assigns to the town that used this cemetery. A centre that could execute works of such magnitude for the repose of its dead, whose dust has formed a mound of considerable height, must have possessed no mean importance. Unfortunately for Boetticher's theory, we are led to place its site on a spot which shows very feeble traces of ancient buildings; and what is still worse, it cannot be reconciled with the information derived from the Epic, nor can we descry any vestige of a citadel on the point where we are bidden to look for it. Weighty as are these objections against the hypothesis under discussion, there are others of far more serious import.

Boetticher turned to Chaldæa for the type of his incineration necropoles, which he pretends to have also discovered in the Troad. Tells entirely made up of biers set out in rows and heaped up on one another, have undoubtedly been discovered in that region.² In some of these cemeteries inhumation prevails;

¹ BOETTICHER, *Hissarlik wie es ist*.

² *History of Art*.

in those lately explored by M. Koldevey at Surghul and at El-Hibba, near Tello, the bodies appeared to have been more or less completely burnt, and many were found in chambers built of crude bricks.¹ But neither here nor at Mugheir or Warka do we perceive aught that resembles the massive and lofty walls of Hissarlik, or its flanking towers and city gates, provided with a double set of doors, and pointing with unmistakable directness to the necessities of defence; or yet to spacious buildings the mutilated plan of which is explained by that of the Tirynthian and Mycenaean palaces. The depth of the stoutest retaining walls at Hibba is somewhat below one metre. As we read M. Koldevey's account, invoked by Boetticher in support of his hypothesis, we at once feel how wide is the difference between the hill riddled by Schliemann, and the funereal tells that have been explored in Lower Chaldæa; in these almost every blow dealt with the spade lays open a bier, out of which escape ashes and bones, and everywhere around them is found charcoal from the pyres whereon thousands of bodies were consumed. Close to these mounds were traces of erections which at first were taken for houses, but, the explorers having thoroughly cleared them, they turned out to be tombs. It was plain that they had come upon the city and empire of the dead. Lower Chaldæa has no rocks of any kind or even hardened clay in which vaults could be cut. To have placed mortal remains on the bare ground would have been devoting them to every species of profanation, and crude brick, in default of stone, would not have lent itself kindly to subterraneous structures. Necessity therefore suggested the notion of those ash-tells, those jars piled up a hundred feet high. No such reasons existed for resorting to this expedient in the Troad, where hill-sides are but masses of soft limestone which can be cut with ease. True, the Trojan necropolis has not yet been found; but likely enough it lies at the foot of the hill, buried under the fallen earth which covers its base. I have not seen the tombs of the burnt city, for the simple reason that Schliemann excavated them after my return to Europe. On leaving Hissarlik with him, however, for the Dardanelles, we took the road skirting the sea-shore, that we might inspect tombs excavated in the rock which had just been opened. Here then,

¹ R. KOLDEVEY, *Die Altbabylonischen Gräber in Surghul und El-Hibba* (*Zeitschrift für Assyriologie*, herausgegeben von C. Bezold).

as soon as man began to take some sort of care of those that had been dear to him, his first thought, doubtless, was to entrust them to the earth, providing for them a rock-cut chamber, or burying their ashes, as in Homeric times, under a mound of sand, and overlaying it with stones to prevent the dissolving action of the rain. In order to have the right of comparing the mound of Hissarlik with Chaldæan necropolises, the former should have something to show approaching those terra-cotta vats which in the latter form, as it were, the cells of its huge funereal hives; nothing of the sort, however, has come from the depths of the fortress-hill. No matter at what point of the mound trenches are sunk, they never fail to bring out those great jars (*πίθοι*), which not unfrequently are over two metres in height (Fig. 57). Such vast recipients as these were clearly not fashioned for the lodgment of a pinch of ashes. In one and only one of them was there found a skull;¹ probably the result of some accident, but of what nature it would be hard to say. Hundreds of these pithoi were broken during these excavations. I saw several in the act of breaking just as they emerged into the open from the bowels of the earth; some were empty; others half filled with earth, owing to the lid having moved; some had still grain in them; but in no instance were they lying on their side, as earthen sarcophagi are invariably found, whether in Chaldæa or in any other quarter of the globe; and none contained human bones or ashes. At Ben Kioi, a hamlet close to Hissarlik, were uncovered sepultures for which very similar jars had been employed, evidently because of their cheapness; but they lay horizontally, and were carefully sealed with a stone slab. The bodies they enclosed, however, had not passed through fire, but had been placed intact in these common biers.² At Hissarlik, on the other hand, pithoi are all found standing, their point below thrust into the ground; and all are furnished with large orifices, into which both hands could dip at once and bring out of or stow provisions in them. They were silos or cellars. True, Schliemann unearthed a female and two male skeletons in the burnt city; but they were found, not in pithoi, but among the ruins of domestic abodes. By the side of the male skulls were spears and perhaps fragments of helmets.

¹ *Hissarlik-Ilion, Protokoll der Verhandlungen zwischen Dr. Schliemann und Hauptmann Boetticher.*

² R. VIRCHOW, *Alttröjanische Gräber und Schädels*, 1882.

These skeletons may be those of the owners of the houses in which they were discovered, who perished whilst fighting for their homes on the day when the town was taken and destroyed; or of soldiers who fell in their armour during the last assault.¹ The excavations have also yielded a few vases of much smaller dimensions, which contained human ashes, teeth, small bones, and in one of them an almost perfect cranium (Fig. 66).² The pottery wherein these remains were discovered is of a rude description, and seems to have been made in this district from the remotest age down to the full growth of Hellenic civilization. There is much to be said in favour of the conjecture which has

FIG. 66.—Vase with human ashes and the skeleton of an embryo.

been put forward with regard to these urns, to the effect that they largely belong to the period which followed the destruction of the second city; and that they continued to be put there until the Macedonian epoch.³

If two were found almost on the rock, in the soil of the

¹ *Ilios*; *Protokoll*.

² The account which appears in the *Ilios* about these urns would be misleading enough, had not Schliemann taken care to inform us that in those early days his imperfect technical knowledge led him to call "funerary" (*aschenuern*) all urns which in shape were more or less akin to examples so used by most nations of antiquity. The number of vases, he declares, which contained human ashes is exceedingly small. In one was discovered an embryo.

³ SCHUCHARDT, *Schliemann's Ausgrabungen*.

earliest settlement, it is doubtless because the ruins in their fall worked out a gully which was utilized for burial. The hill, for centuries, was sparsely populated, and during that time the adjacent villages must have used it as a common cemetery; both on account of its being near at hand, and the ease with which a hole could be dug wherein to place the dead. It would be idle, then, to deny that incineration was practised here through long series of years, or that the hillock of Hissarlik does not enclose in its depths the ashes reverently collected out of many a funereal pyre; but what we cannot accept is that the mound in question should be entirely constituted of such materials as were required for the performance of funereal rites, together with the accumulated dust of thousands of people.

Granted the hypothesis under discussion, the spade ought to have cleared a mass having a general resemblance to a pyramid, provided with platforms on which to light pyres, and with funerary vases staged around; in a word a mass necessarily with a base wider than its summit. So far is this from being the case at Hissarlik, however, that the several strata which go to the making of the mound have not inaptly been termed an inverted pyramid with a flat top, the hill having manifestly increased in width from settlement to settlement. Thus the lowest stratum resting upon the virgin rock is proportionately smaller than the one above it, and this goes on to the very top. But everything falls in its natural place if we suppose that several stages of habitations rose here one upon the other. As they decayed they sowed their ruins around, part of which slid down the slope of the hill and remained there; and on these accumulations, in the course of time, houses were built.

To this array of arguments may be added the strongest of all, namely, the close analogy observable between the larger buildings of the burnt city and certain edifices of Tiryns and Mycenæ, which have been proved to be the main chambers of a palace; the Homeric megaron, of which we shall have more to say in the sequel. Boetticher however, nothing daunted, declared that Tiryns might well harmonize with Troy, since it was, like it, a fire-necropolis. Bases of columns that once had formed porticoes around courts and gateways, decorative fragments from the inner walls of palaces, were brought forward in vain; he persistently maintained that porches and bays, friezes and metopes, all was

pure illusion; that the notches in Dörpfeld's plan were accidentally made by the explorer himself, and had been inadvertently allowed to remain. After Dörpfeld, M. Tsoundas discovered another palace at Mycenæ, exhibiting all the essential characteristics of the Trojan and Tirynthian palace. The difficulty of challenging witnesses whose number waxed stronger every day was lost on Boetticher, who retorted that whatever opinion might be held as to Mycenæ and Tiryns, proved nothing in regard to Troy, since the plan of the Trojan megaron had no existence in fact. The great hole, he affirmed, was of Dörpfeld's own making, brought about by the destruction of the partition-walls, which originally had divided the building into a number of small chambers, to which a funerary destination might well be attributed; and had imparted thereby a totally different aspect to the structure. That its primitive state, the true and only one that could be taken into consideration, was to be sought in Burnouf's plan of 1878. To this Schliemann and Dörpfeld answered, that the plan in question applied to a different stratum than the one he challenged, having been made before the excavations which had brought to light the buildings of the burnt city; they gave vent at the same time to their indignation at having their sincerity and the results of their work perpetually questioned by one who had not even taken the trouble to test them on the spot. As regards Schliemann, he had to a certain extent laid himself open to these attacks; there were grounds to suspect, if not his good faith, at least the soundness of many of his statements. In his eagerness to acquaint the world with his discoveries, he all too soon had rushed into print. Accordingly his information, necessarily incomplete, conflicting at times and therefore subject to correction, was unmercifully dealt with by his critics.¹ These strictures, however, could not be laid at Dörpfeld's door, and he may be forgiven if he was somewhat rough in repelling the unjust attack made upon his veracity. That he faithfully notes down the faintest

¹ In no unfriendly spirit—for he accepts Dörpfeld's conclusions—M. J. Durm, a rising young architect, in an article dealing with the debate carried on by Schliemann and Boetticher, which he published on his return from the Troad, has shown how far Schliemann exposed himself to be attacked through hasty work and consequent oversights (*Zum Kampf um Troja*, in the *Centralblatt der Bauverwaltung*, 1890).

traces which these ruins have preserved, I was able to judge for myself on the spot. On looking at his notes and sketches of Tiryns, Mycenæ, and Troy, I had been struck by certain peculiar details, none of which were forgotten in his plans, all having been set down and accounted for in the most natural manner by this scrupulously minute and sagacious observer. It will be easily understood that in such conditions as these, Schliemann and Dörpfeld should have been anxious to have their cause heard on the spot before a competent tribunal, whose members were recruited from the principal learned bodies of Europe, Schliemann offering to defray all travelling expenses. In order that his guests should suffer no inconvenience from the lateness of the season, he ran up a number of shanties on the eastern slope of Hissarlik, and to keep out damp and rain had the walls lined with paper prepared with bitumen. Pines from Mount Ida supplied the wood for the erection of Schliemannopolis, as the small village was christened by us. Vienna and Berlin sent Niemann and von Steffen, than whom no more efficient judges could well be found.

Notwithstanding wind and rain, several days were spent in visiting the works, in answering the questions put by the delegates, and in discussing Boetticher's assertions and objections. When required, a gang of workmen was immediately told off to clear such portions of the ruins as the commissioners wished to examine afresh. A daily report was drawn up of these transactions, in which, whilst unanimously acknowledging that the information furnished by the explorers, whether in their writings, their maps, plans, or drawings, was in perfect harmony with the evidences found on the ground, they pointed out that certain sides were still obscure and unaccounted for, of a nature too which further excavations could alone make clear. In the main, however, the delegates avowed themselves favourable to the views expounded by Schliemann and Dörpfeld.¹

A second conference was held at Hissarlik in March 1890, in which MM. Babin, Humann, Hamdi Bey, Calvert, von

¹ Reference has already been made more than once to this official report, of which a copy was forwarded to all the scholars who had shown an interest in the question. Niemann's recollections of his visit to Hissarlik, and of the conclusions which a survey of the ground led him to adopt, will be found in an interesting paper entitled, *Kampf um Troja*.

Duhn, and Virchow took part. After an inquiry as minute and exhaustive as the first had been, these veterans of many archæological campaigns gave their adhesion in emphatic terms to the theory adopted by us; Boetticher's hypothesis of an incineration necropolis was set aside as utterly inadmissible.¹

Schliemann triumphed along the whole line. It only wanted, to make his joy complete, to compel his rabid opponent to own himself beaten; but all that could be wrung out of Boetticher was to declare that he had never intended to accuse Dörpfeld of bad faith, and of intentionally tampering with facts; he clung to his belief and old affirmation, however, as to mistakes and blunders having frequently been made. Regardless of the fact that the opinion of the intelligent public had declared against his theory, on his return to Germany Boetticher, with cool assurance worthy of a better cause, perhaps too because he had committed himself too far to recede from his position with the honours of war, reproduced his tentative system, with all its threadbare arguments. To waste more time on an unworthy subject would argue the like unwisdom on our part. Ever since my short stay at Hissarlik in 1890, I find it hard to grasp how, after inspection of the open trenches furrowing the hill on every point of the compass, any one can still believe that all these stupendous accumulations are the result of human ashes, and of buildings raised for funereal purposes. For my part I see in these several stratifications the continuity and movement of human life, only interrupted here and there to take up afresh the thread of its existence, the beginnings of which, however, are lost in the dim past. When we look at the wealth of utensils discovered in the ruins of Hissarlik, when we bend over those tall jars in which the cautious and thrifty husbandman stowed away provisions fated never to be consumed, when in the untouched beds we recognize, here the mark of cross-beams that supported the walls, there the rushes that covered these poor dwellings, when we perceive further the prodigious quantities of shells (*cochlæ*), which served as food to the inhabitants, the image unconsciously rises before our mind's eye of numerous generations,

¹ The report of this second Conference may be read in SCHLIEMANN and DÖRPFELD'S *Account*, 1890. Virchow has told of his second visit to Hissarlik in *Zeitschrift für Ethnologie, Verhandlungen*, 1890, under the heading, *Reise nach der Troas*.

of populations that succeeded one another on this hillock, most of which lived and died after a humble and obscure existence—one, however, touched and illumined by a ray of light, of poetry and art, stands out from the shadow which shrouds its less gifted fellows. Though we cannot give it a name, it has survived and will live for all time in those of Pergamus, Ilium, and Troy. Despite conflicting evidence and certain discrepancies noticeable in the account which Schliemann gives of his discoveries; despite, too, subtle and plausible arguments put forward against his conclusions, unless it is proved to me that I dreamt whilst wide awake at Hissarlik, never can I be persuaded that I did not tread the ground of a primitive settlement there, the cradle of that oldest civilization which went before that of classic Greece in the Mediterranean.

Tiryns.

The indefatigable explorer whose name recurs on every page of this history, will take us from the plain where once was Troy, across the Ægean, on to the coasts of Argolis (Fig. 67). Following on Schliemann's track, we shall expound the main results of his discoveries in pretty much the same order as they occurred. As it happens, this order, broadly speaking, corresponds with that of the early settlements, the industry and art of which are now known to us by monuments at once numerous and of great interest. The excavations at Hissarlik led to those at Mycenæ and Tiryns. These cities, compared with Troy, represent a decidedly more advanced stage of culture, a later phase in the development of the same art and industry. In the Argian myths, Tiryns is called the elder sister of Mycenæ; both cities claimed descent from the sons of Danaüs; Præteus at Tiryns, and Perseus, his great grandson, at Mycenæ. Danaüs, said the same myth, had come from Egypt; and Præteus and Perseus had had close dealings with Lycia. In the sequel of this study we shall inquire how far the evidence furnished by monuments coincides with that supplied by the mythical cycle. The site of neither city is in dispute. When modern explorers began to search the soil of Greece for traces of ancient cities, the localization of Tiryns was one of the first

which they determined. Guided by ancient writers, they identified it without any difficulty, between Nauplia and Argos, some 1,500 metres from the sea, towards the south-east corner of the plain, on the lowest and flattest of the several rocky hills which



FIG. 67.—Map of Argolis.

island-like rise out of the marshy level (Fig. 68). They made straight for the spot called Palæo-Kastro, led thither by remains of an enclosure built of enormous stone blocks belonging to the town which, said tradition, had been the birthplace of Heracles. The prodigious depth of its ramparts, and the inner galleries

which pervade them, already excited attention and wonder in the time of Homer; whilst they were shown and talked about in later days "as the work of the Cyclopes."¹

Tiryns, like Mycenæ, became desert from the fifth century B.C., when its inhabitants were driven out and transported to Argos. The Argives, whose neutrality in the Persian war amounted to treason,² could not forgive the Tirynthians for having embraced the popular cause, and above all for having opened their gates to revolted slaves, who had made good their escape from Argos; and who, secured behind the strong ramparts



FIG. 68.—View of gulf and plain of Argos.³

of Tiryns, harried the land of their former masters.⁴ The expulsion of both Tirynthians and Mycenians from their respective

¹ *Iliad*: οἱ δ' Ἄργος τ' εἶχον Τίρυνθ' τε τεύχεσσιν; APOLLODORUS, *Biblioth.*, STRABO; PAUSANIAS.

² The names of both Tirynthians and Mycenians can still be read on the triple bronze serpent which formed the base of the tripod at Delphi, now in Atmeidan Square—once the Hippodrome—at Constantinople. The best account which has appeared in print respecting this bronze piece is *Das Platzeische Weihgeschenk in Delphi* (*Jahrbuch des k. d. archäologischen Instituts*, 1886).

³ The above engraving is after a photograph. The road seen in the foreground leads from Nauplia to Argos, and passes in front of Tiryns.

⁴ HERODOTUS.

FIG. 69.—Tiryns: view of the hill from the west.

cities doubtless occurred about the year 468 B.C.¹ From that day travellers were solely attracted here for the sake of the grand and noble ruins, around which was cast the halo of tragic associations. In the opening years of this century, Leake, Gell, and Albert Blouet found them hardly changed from the time of Augustus and the Antonines, when they were visited by Pausanias and Strabo. The apparent portions of these buildings were forthwith described with pen and pencil, and the differences which distinguish them from those of the classical age were noticed; but until Schliemann laid bare the virgin rock both here and at Mycenæ, nobody knew or suspected the existence of the very peculiar art, the relatively advanced industry of the nation which had raised these walls; no one then had an idea of the importance of the civilization which they implied, nor of the enormous gap parting this art from the later culture of Hellas.

The calcareous rock which carries the ruins of Tiryns is about three hundred metres in length, by one hundred metres in breadth; the height above the surrounding plain is eighteen metres, and twenty-six metres above sea-level (Fig. 69).² The mass dips several feet from north to south, and consists, unlike the Athenian acropolis, terminating by a single plateau, of three platforms, which may be called the upper, middle, and lower citadel. The area covered by these three esplanades is of no great extent, and cannot therefore have enclosed the town dependent on the royal castle, whose situation must be sought in the plain. The prince, with his family, men-at-arms, and servitors, inhabited the impregnable stronghold above; whilst the common people, labourers, shepherds, and artisans, lived under the shadow

¹ On the destruction of Tiryns, PAUSANIAS has the following entry: "After the Medic wars." Though no date is given, we may reasonably assume that the events to which he refers, namely, the razing to the ground of Tiryns, Mycenæ, and Mideia, took place in the same year. The Argives wished to increase the population of their own city at the expense of the towns seated in the plain.

² Our information for this chapter is taken from DÖRPFELD, *Tiryns, the Pre-historical Palace, &c.*, by H. SCHLIEMANN. Dr. Adler's preface and Dörpfeld's contributions—the fifth and sixth chapters are entirely written by him—singularly enhance the value of the book. The statements and conclusions of the latter may be safely relied on, based as they are on personal observation. An abridged exposition of the result of these excavations, written by BURNOUF, appeared in the *Revue des Deux Mondes*, March 1887.

of what used to be called in feudal times the "Hall." When pirates appeared on the coast, or an enemy held the plain, whose numerical strength counselled prudence rather than a bold front, the villagers, putting hastily together their few valuables, drove their herds before them, and took refuge behind the stout ramparts, huddled there somewhat too closely for comfort, but at any rate safe. As soon as the danger was over they returned to their fields, and in no time the mud huts and shanties which the invader had burnt down to revenge himself for his bootless expedition were set up again. The plough, which for centuries has been driven through the fertile soil, has destroyed what little remained of these dwellings; but wherever Schliemann's shafts have been sunk deep enough, they have never failed to bring out fragments of prehistoric pottery, either painted or plain, and knives and arrow-heads of obsidian.¹ All these relics came from the open village girding, like a living belt, the royal borough, and doubtless extending close up to the sea, so as to be near the coast-market, where the alien trader temptingly spread out his wares before the simple inland folk, who had brought with them whatever they could spare from their year's produce, grains, skins, and the like. The boat of the Semite, meanwhile, was moored in the creek some two kilometres south-west of Tiryns, near to the Hagios Pandeelemon chapel, where a jetty built of stone blocks, apparently much worn, would seem to point to remote antiquity.²

Having indicated the presence and noticed the character of the populous centre implied by so imposing a citadel as that of Tiryns, we next come to the area and the wall enclosing it (Fig. 70).³ The massive rampart has been described by Dodwell, Leake, Blouet, and quite recently by Steffen;⁴ MM. Schliemann and Dörpfeld, however, in clearing it almost along the whole circuit in 1885, discovered many instructive details which had escaped

¹ *Tiryns*.

² *Ibid.*



³ Dörpfeld's plan, given under Fig. 70, was taken in the first year of the excavations, 1884. This we have corrected and completed from the finds of 1885.

⁴ In the text by Steffen will be found interesting details bearing on the circuit of Tiryns, which he compares with the fortification wall of Mycenæ, pointing out resemblances and differences between the two, whether in the mode of building, position of the gates, towers, etc. Steffen's plans were made in 1881-82, that is to say, before the excavations of 1884-85, carried on here by Schliemann and Dörpfeld.



HISTORY OF ART, Vol. I. Pl. II.

CITADEL OF TIRYNS.

-  Walls of fortress either hidden or obliterated.
-  Existing walls of fortress.

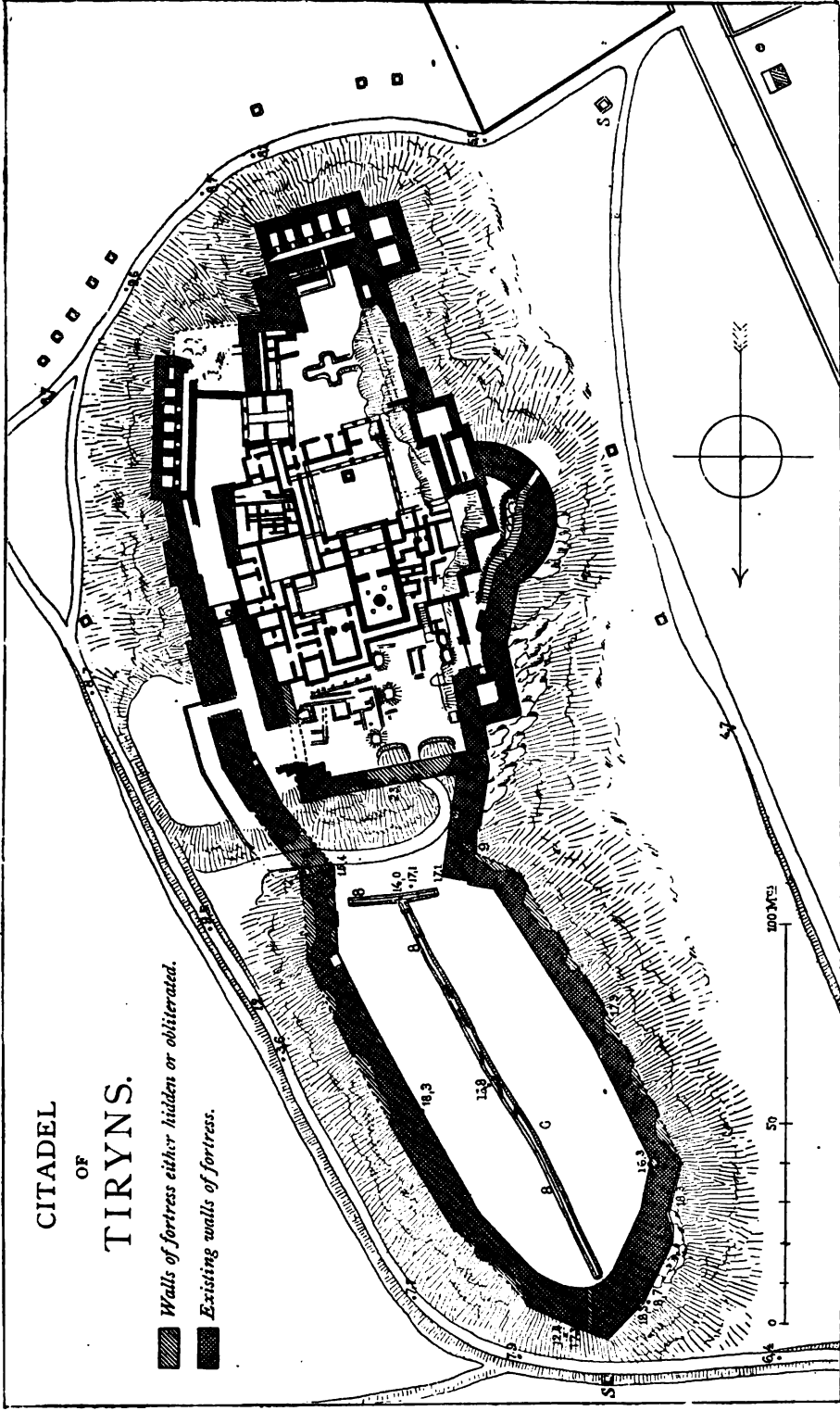


FIG. 70. — General plan of the acropolis.

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their predecessors. These enable us to judge of the resources which the military architecture of that remote age had at its disposal. Until lately no one had thought to inquire if aught remained of ancient structures once encircled by the rampart. In the days of Pausanias and Strabo, the ruins were already hidden under soil or overgrowth; people came to admire and look at the walls alone,¹ because they were reputed to have been erected by wonderful craftsmen called Cyclopes, who had come from over the sea. The surprise they felt in presence of these masses translated itself into exaggerations of language from which sober-minded Pausanias himself is not free. "The wall," says this writer, "is all that remains of Tiryns; it was built by the Cyclopes, and consists of rude blocks, so large that a yoke of mules could not move the smallest of them; small stones serve to fill up the intervals and complete the work" (I. ii. 25). Smaller stones are certainly fitted in between the larger and somewhat irregular polygons, but it is not correct to call, as he does, the great blocks "rude, unhewn," which, with no better authority, many modern travellers have repeated after him (Fig. 71). This was observed by Dörpfeld on uncovering pieces of the wall which, not having been exposed to the weather, were found in better preservation. "Nearly all the stones, previous to being set up, had been prepared on one or more faces; in this way they had now received a lower bed, now a smooth surface roughly worked with the pick-hammer. It is then a misnomer to call the stones at Tiryns unprepared—roughly hewn would describe them better."² Again, Pausanias has overstepped the mark respecting the size of the blocks; though to be sure the largest reach in length two metres ninety centimetres by one metre ten centimetres to one metre fifty centimetres in height, and from one metre twenty centimetres to one metre fifty centimetres in thickness.

¹ This is plainly stated by PAUSANIAS: τὸ δὲ τεῖχος, ὃ δὴ μόνον τῶν ἐρείπιων λείπεται. From Clavier's translation of the passage given below, it might be inferred that Pausanias contradicts himself: "There still remains at Tiryns," he makes him say, "some vestiges of the house of Præteus." But the Greek sentence has: Σημεῖά τε τῆς ἐν Τίρυνθι οἰκίσεως Προίτου καὶ ἐς τόδε λείπεται. Clavier would seem to have confused οἰκήσεις with οἶκημα. It is plain that what Pausanias wishes us to understand is that there still remains at Tiryns something which bears witness to the residence and authority exercised there by Præteus. That something is the enclosure which he describes.

² *Tiryns.*

One cannot help a feeling of surprise at the technical skill of a builder who could not only transport, but get in position these enormous masses, whose collective weight Dr. Adler estimates at 12,000 or 13,000 kilogrammes.¹ The quarry, it is true, was at no great distance from Tiryns, being situate at the foot of the rocks that bear the citadel of Nauplia, where traces of ancient stone-quarries are still visible.² But even so, it is none the less surprising that with very imperfect appliances they should have been able to displace and handle such enormous blocks of limestone. These, however, are exceptional, and if the

FIG. 71.—Tiryns: section of wall through the middle of the eastern face.

weight of several stones averages 3,700 to 4,000 kilogrammes, the most part could be easily moved by one or two men.³ The units throughout are not only larger than at Mycenæ, but larger than those of any other circuit in Greece.

Travellers who have described these walls have all formally stated that the stones were loosely piled up one upon another without mortar, leaving the joints wide open. Like Pausanias, they contented themselves with pointing out that the builder had used smaller stones to fill in the interstices between the irregular blocks. M. Dörpfeld, who looked at closer quarters,

¹ *Tiryns*.

² *Ibid.*

³ *Ibid.*

is of another opinion. "All the stones in the walls of Tiryns," he writes, "were bonded with clay mortar. If some of the joints have no binding material, it is because it was washed away by rain or some other cause—lizards and mice, which live in countless numbers in these walls. Some foundations alone appear to have had their stones put together without mortar."¹

Then, too, the term "polygonal," usually employed in speaking of this masonry, is hardly correct; for the image it calls forth is that of a complicated, net-like appearance made by many joints, where we should look in vain for anything approaching

FIG. 72.—Portion of western citadel wall.

a regular stratification. This occurs in a portion of the circuit-wall of Mycenæ. At Tiryns, however, despite the unequal size and imperfect cut of the blocks, we find almost everywhere regular courses; and the marked tendency to horizontal beds which crops up here and there is even perceptible where the masonry is at its roughest (Fig. 72). To this I would add a general observation to the effect that the wall at Tiryns nowhere offers the incline which I pointed out as a rare occurrence, and peculiar to the fortification wall of Pteria, in Cappadocia,² and which Schliemann also noticed at Hissarlik.³ No talus is

¹ *Tiryns*.

² *History of Art*.

³ See above, pp. 180—82.

seen at Tiryns, the outer face of the fortification wall being everywhere vertical. Around the lowest citadel the altitude of the rampart, in places, is still seven metres fifty centimetres, and seven metres to eight metres deep. On the other hand, the circuit around the upper esplanade, which carried the main buildings, offers interesting and singular constructive details. Its line is broken by salient and re-entering angles without number, which played the part of strengthening towers, and enabled the garrison to keep a sharp outlook and beat back the enemy in every direction; whilst its thickness reaches the stupendous figure of seventeen metres fifty centimetres. In the body of the rampart were passages and recesses intended to facilitate covered communication, protect the defenders against the missiles of the assailants, and protract the defence as long as possible. There was no spring on the plateau, and no aqueduct passed at the foot of the wall, as at Mycenæ; cisterns, however, had been multiplied to save the besieged from agonizing thirst; for this is the function which has been ascribed to several chambers destitute of doors and windows, but with an opening at the top; their walls are overlaid with a thick coat of clay. There was no difficulty in finding the required space for these reservoirs in the depth of walls such as these.

The builder's greatest constructive effort is seen in the southern wall. On the south-western side, in a kind of bastion supported by a projection of the rock, are two rectangular chambers; they have no entrance on any side, and may have served as silos, or more probably as cisterns. The broken bricks which fill these chambers indicate that the upper portion was built of crude brick. The southern face, to the rear of the mass enclosing these reservoirs, in length measures twenty metres. Before this portion of the enclosure had been completely laid bare, it was supposed to consist of two storeys: a substructure eleven metres thick, and an upper retreating section which left a free space or path six metres fifty centimetres broad; and in this way it was restored by Dörpfeld (Fig. 73). In the upper storey, four metres fifty centimetres, is the well-known passage with the doors leading from it. These served as sally-ports by which the defenders issued from the corridor on to the esplanade, in order to defend the castle, returning under shelter as soon as the attack had been repulsed.

The excavations of 1885 have led to different conclusions. No circular path ever existed on the south face. The so-called sally-ports were doorways opening into five separate chambers, and six similar apartments were uncovered on the western side. The hollow of these chambers was filled by the gradual converging of the stones of the side-walls until they met at the top. The height of the wall above these chambers must have been the same as that which we find in the plan of the passage. The coping of the internal face of the rampart filled, in its fall, the hollow space around the casemates, and led to the false

FIG. 73.—Section of wall as at first conjectured by Dörpfeld.

assumption just referred to; this, with praiseworthy promptitude, was publicly acknowledged by Dörpfeld.¹ By the light of recent discoveries, the following conclusion has been reached. In front of the palace is a great courtyard (F), and traces of a porch appear on the south side (E), at any rate a double flight of steps had there its rise (D); they bisected each other at right angles, and led to a narrow passage (C) contrived in the body of the wall (Fig. 74). The mean breadth of this gallery is one metre fifty-five centimetres, and its height about five metres.

¹ *Tiryns*.

A plain solid mass, in length eleven metres, and seven metres fifty centimetres thick, separates it from the courtyard. Four metres from the ground, the stones of the side-walls begin to

FIG. 74.—Transverse section of south wall. *a*, vaulted chamber; *b*, gallery; *c*, gallery with flight of steps; *d*, window of gallery.¹

approach each other, and their corbel forms a pointed arch. The western end of this passage is closed; but its eastern end

FIG. 75.—Longitudinal section of south wall through c c. *a*, vaulted chamber; *b*, inside of south tower.

is lighted by a window which, starting with the same breadth as the corridor, contracts towards the outside down to ten centi-

¹ In all these figures the existing portions of the wall are indicated with a dark tint, and the restored ones by a lighter shade.

metres, in the shape of a loophole (Fig. 74, *d*). The apertures of this species of arcade let in enough light in the passages and the adjoining chambers (Pl. II. BB, and Fig. 75). Were these chambers provided with narrow bays pierced in the end wall? We incline to think so; but the external slabs in which they were cut having disappeared, we are reduced to conjecture on this point. The chambers of the corresponding gallery in the eastern wall have certainly no windows, but that passage seems to have been better lighted. In regard to the gallery and chambers, we do not think it is possible to dispute the destination we assign to them. They are stores in which arms and provisions of all kinds were conveniently and safely stowed away. If we admit that each chamber had a window, like that of the passage, which could serve as a loophole, six archers would barely have found standing



FIG. 76.—Plan of eastern wall. *a*, vaulted chambers; *b*, gallery.

room for defence within the whole of the southern wall. Is it likely that so elaborate a work was constructed in order that this portion of the curtain should accommodate six combatants? The erections are more naturally accounted for from a desire of the architect to assure the victualling of the stronghold, which thus would not be obliged to surrender through famine. As to the garrison entrenched behind these mighty and tall bulwarks, it could make light at efforts to overthrow or scale them.

A similar arrangement of six chambers, but somewhat smaller (PPP), with gallery at the back (RR), may be seen in the south section of the eastern wall. The mean breadth of these casemates is three metres five centimetres, and their partition walls measure one metre seventy centimetres (Fig. 76); whilst the dimensions of the corresponding chambers in the

southern rampart are three metres thirty centimetres and one metre ninety centimetres. The end wall is completely destroyed; the depth of three metres thirty centimetres which has been assigned to these chambers cannot be far wrong.¹

These inner passages, with the rude massiveness of their architecture, the simplicity of the means employed by the builder to obtain effects which voussoirs, with their ever-varying play of light and shade, alone can give, but of whose principle he was ignorant, are those which most powerfully and abidingly affect the traveller who visits Tiryns. Some faint notion of

FIG. 77. —Entrance to the gallery from the south-east angle of the circuit.²

their character may be gained from the illustrations (Figs. 77 and 78), which were taken at different times. The first is the entrance to the wide corridor as it appeared sixty years ago; the other shows the interior, which was completely cleared by recent excavations. The staircase leading to it has left no trace; the excavations, however, permit us to assume that a flight of steps had its rise under a portico situate east of the great

¹ In *Tiryns* are set forth Dörpfeld's arguments for reaching the above figures.

² The view is taken from a spot midway between the doorway of the first and that of the second chamber.

inner court, a kind of drilling-ground whence the defenders of the citadel could rapidly move to such points as were occupied by the reserve forces, and station themselves either on the top of the rampart or at the entrances threatened by the foe.

The same elaborate care and arrangement were bestowed on the entrances pierced in these massive walls as upon the ramparts themselves, the staircases, passages, and their dependencies. The main road was on the east side. It rises to the citadel at an easy gradient by a ramp ($\Delta\Delta$), which begins some way back to the north, and debouches exactly at the point of junction of what we have called the middle and upper

FIG. 78.—Perspective view of gallery of eastern wall. *a*, doors of chambers; *b*, partition wall of chambers.

citadel. The ramp is four metres seventy centimetres broad, and this breadth is preserved for the upper part of the entrance passage between the walls; but the lower part of this corridor towards the floor is reduced to two metres fifty centimetres by blocks set up on either side. Curiously enough, no gate-portal seems to have existed here, for neither ground-sill nor posts have been found. From the fact, however, that the general arrangement is what was subsequently adopted in the traces of all Greek fortifications, it is hard to admit the non-existence of a doorway at this point. The assailants ascending the chief ramp had to creep along the eastern wall for about two-thirds of its length, during which they would have their right side, that is

to say, that which was uncovered by the shield, exposed to the darts of the defenders.

FIG. 79.—Transverse section through salience of south wall. *a*, postern; *b*, staircase; *c*, rock; *d*, west boundary wall of palace; *e*, cellars in the citadel wall (Pl. II. v); *f*, bath-room of palace; *g*, left corridor of bath-room.

If the excavations of 1884-1885 have added little to our knowledge of this portion of the enclosure, they have unex-

pectedly revealed a minor entrance on the west side of the citadel. Here, in front of the rectangular wall surrounding the esplanade, where rose the palace, is a semi-circular structure. M. Dörpfeld, in order to enable the student to grasp the arrangement of this portion of the rampart and the foot-path or passage, has given a transverse section (Fig. 79) and a perspective view of it (Fig. 80). The massive wall, seven metres fifty centimetres thick, is entered from the outside by a gate three metres broad (τ), rising to a pointed arch, like that of the passage and chambers on the south and east sides. This

FIG. 80.—The staircase seen from the top of the south wall. *a*, exterior citadel wall; *b*, rock; *c*, wall commanding flight of steps; *d*, boundary wall of palace.

postern leads to a staircase, the first steps of which are cut in the solid rock, and the next, up to the twentieth step, wind through an artificial breach in the rock, after which they lean against the rampart. From the sixty-fifth step the stairs are completely destroyed; farther on a piece of the substructure which supported them has been preserved to the distance of twenty-one English feet. This section, though much injured, is sufficiently preserved to show the terminating-point of the ramp. The staircase opened into the court behind the palace.

A short flight of steps, still in position, gave easy access to the main apartments of the building. This stairway constituted the shortest and most direct means of communication between the inhabitants of the citadel and the city extending in the plain; and in case of siege afforded them a convenient and favourable sally-port. Small indeed, meanwhile, would have been the enemy's chance of penetrating into the fortress through this way, for they would find themselves shut within a narrow passage, exposed both to the missiles of the garrison gathered on the rampart, and thrust back by soldiers posted on the upper steps.

This description will have conveyed some idea as to the strength of the defences which the warlike chiefs of those days accumulated on the flanks of the hill where they had chosen their domicile, and surrounded themselves with such luxury as was consistent with existing civilization.

The discovery, however, which has surprised archæologists quite as much as the exhumation of the shaft-graves at Mycenæ, has been that of a building, the foundations of which cover a very considerable area.¹ From its ground-plan and elaborate arrangement, experts—Boetticher excepted—have unanimously agreed to recognize here a princely residence, a palace, whilst our notions of the taste and habits of the Mycænic ornamentist are supplemented and enlarged by what remains of its inner decoration.

Let us return to the entrance τ, opening in the northern wall of the upper citadel, which, as remarked above, was never closed by a real door, and which mayhap, when beleaguered, they barricaded with stones and timber. If the enemy succeeded in forcing it, his troubles would not by any means be at an end; in fact, it was then that his position became most difficult, for he found himself cooped within a narrow alley, between the citadel enclosure and the palace wall, which is here of extraordinary strength.

From the two upper platforms, the defenders, sheltered behind embattlements, or rather palisades, rained arrows and

¹ M. Christian Belger reminds us that M. F. Tiersch announced the existence of this building as far back as Sept. 30, 1831, in a letter where he mentions having lighted upon the foundations of the ancient palace of the Tirynthian kings, along with the bases of three columns. He was obliged through want of means to abandon his researches (REINACH, *Chroniques d'Orient*).

boulders on the assailant, penned up as it were in this sort of bow-net. If despite his disadvantageous position he persisted in his advance, he would find his way barred by obstacles, the nature of which he could not determine, but which would probably turn out to be a folding-gate, turned to the back court of the upper citadel, and a narrow passage leading to the middle citadel. Affirmation, however, is rendered impossible, because on this spot the ground is as yet encumbered with rubbish.

The south side, on the other hand, where stood the principal entrance, has been laid bare. This monumental gate closely resembles the Lions Gate at Mycenæ in material, construction, and dimensions. Like this, it is built of enormous quarry-stones of breccia; but unlike the Treasury of Atreus, where the door-frame is constituted by the stones of the masonry, its piers and lintels are formed of independent blocks. Unfortunately, the gate at Tiryns is in a much poorer state of preservation. The large threshold, however, one metre forty-five centimetres broad by three metres in length, is still intact; the door-post on the right, consisting of two unsquared blocks one metre forty centimetres wide and ninety-five centimetres deep, is also preserved, and rises to a height of three metres twenty centimetres; but the jamb on the left has had its upper portion broken off, and along with it have disappeared not only the lintel and lightening beam, placed above it as at Mycenæ, but the slab filling the cavity as well. These may perhaps have been re-used. Between the distant period when the citadel walls were erected, and the beginning of the fifth century B.C., many generations succeeded each other on this narrow plateau, during which the buildings underwent many alterations, so as to bring them in harmony with the taste and needs of the inhabitants. We have evidences that the palace was rebuilt, and other structures raised on its ruins. That the lower city, though decadent, was not entirely abandoned, is proved by Schliemann's excavations, who found remains of a small town stretching from the foot of the rock towards the plain, which struck money on its own account between the fifth century and the Macedonian era, of which a whole series was discovered thirty years ago, or thereabouts, below and east of the citadel. At that time, however, the summit of the hill was covered with rubbish, through which protruded the mighty

circuit-walls. Traces of habitations again re-appear in the Byzantine period. Over the ruins of the buildings situate in the great courtyard, in the southern portion of the citadel, the foundations of a Byzantine church have been uncovered. Connected with the Christian church was a cemetery, some of whose graves were built with slabs dressed fair, others with unsquared stones set in lime mortar, others again with tiles only.¹

To return. The mutilated state of the gate is regrettable on more than one point. To judge from the rich and varied ornamentation which was lavished throughout the palace, we may be sure that the main portal had not been neglected; but if there is much which baffles our curiosity, its mode of closing is perfectly clear. In the threshold are holes for receiving the hinges, and in the uprights the holes into which fitted the round wooden bolt. The said holes are still to be seen half-way up each jamb, *i. e.* one metre fifty-five centimetres from the ground; on one side the cavity is only forty-one centimetres deep, on the opposite side it passes right through the upright into the external wall of the citadel, so that the bolt could be drawn across the gate or pushed back into the wall, according as the door was intended to be open or shut. The entry on the outside is two metres eighty-six centimetres wide, that is to say, precisely the breadth of the Lions Gate at Mycenæ, and three metres eleven centimetres on the inside. The folding-doors were fixed into the recess thus formed; they opened inwards, and when closed rested against the projecting part of the uprights. Though decorated after a certain fashion, the first gateway was but a fortress entrance; the real gate of the princely mansion stood fifty-five metres beyond, at the other side of the esplanade, at the turning of the north-east corner of the palace. This gate has folding-doors, and the arrangement of its two vestibules is the same as that of the *templa in antis*, that is to say, the front consists of two columns placed between pilasters. The plan of this entrance, though simple, is of great importance in the history of Greek architecture; for with trifling differences it is that which will be adopted for all Greek gateways down to the rich Propylæa of the Athenian acropolis. The ground-plan is invariably made up of a gate between two vestibules forming porches.² This portal is comparatively well preserved.

¹ *Tiryns*.

² *Ibid.*

The broad threshold of limestone, four metres long by two metres wide, is still in position. Inside the building portions of a concrete pavement of pebbles and lime are preserved; the walls, made of rubble and clay, are standing to about fifty centimetres above ground; antæ and columns have retained their bases. Consequently, the ground-plan of the building can be restored with the utmost certainty.

The shafts of these columns and the upper portion of the antæ were of wood, for neither stone drums nor monolith shafts have been found; whilst the upper face of the antæ exhibits holes clearly meant to receive metal or wood clamps, which served to fasten the cross-beams superimposed on this species of plinth. Such a mode of joining can only have been applied to materials of different nature. The inner vestibule is somewhat deeper than the external one. A door in its northern side-wall gave access on the right to some secondary apartments, and to a passage leading to the women's quarter. This was the private entrance; strangers passed through the central gateway, with its two vestibules, and reached a great court encompassed on three sides by the citadel wall, the remaining one being taken up by the façade, which was turned to the great bastion described above. The principal doorway was not on this front, but at the south-west corner. Its plan is the same as that of the great gate; but its dimensions are smaller, hence the name of small propylæum which Dörpfeld has given to it. This gate led to the great inner court of the palace, the court of the men's apartment, occupying the culminating-point of the citadel. Hitherto the way has been one continuous ascent; for whilst the threshold of the castle gate is twenty-one metres thirty-six centimetres above sea-level, that of the great propylæum is twenty-four metres sixty-three centimetres, and that of the following gate (κ) twenty-six metres eighteen centimetres above the level of the sea.

The second court forms a rectangle measuring fifteen metres seventy-seven centimetres by twenty metres twenty-five centimetres. The pavement throughout consists of small stones and lime, resting on a deep stratum of concrete. The court is surrounded by porticoes, which afforded a pleasant lounge to the inmates during the noon-day heat, or in bad weather.

Before entering the palace, we wish to call attention to a

rectangular block of masonry, built of irregular sandstone, having a round hole in the middle (Fig. 81). The mass, one metre twenty centimetres in diameter, was at first mistaken for a

2.70^m

1.1

1
0
2
0

FIG. 81.—Plan of pit-offering.

well or cistern.¹ In clearing out the central cavity, however, it was discovered that the circling masonry only reached to a depth of ninety centimetres; below it there was nothing but

2.00 - 1.16 - 1.21^m - 1.16 - 2.00

FIG. 82.—Transverse section of pit-offering.

earth. Accordingly, says Dörpfeld, with whom we are at one, we must regard it as an altar of a distinct character, which we would call a "pit-offering" (Fig. 82).² Among the few pits as

¹ *Tiryns*.

² *Ibid.*

yet known, the most interesting example is that which has been found in the temple of the Cabiri, at Samothrace, described and published by Conze.¹ Sacrificial pits must have been much more general in very ancient ritual than might be supposed

FIG. 83.—Restored plan of megaron.

from their restricted number. The hollow altar runs many more chances of being destroyed than a solid one; the latter may be overturned and even displaced without losing the shape and character by which it is easily recognized. The

¹ CONZE, HAUSER, BENNDORF (*Untersuchungen auf Samothrake*). See also KÖHLER, in regard to the pit found in the Asclepieion at Athens (*Mittheilungen Athenische Abtheilung*).

altar in question rose towards the middle of the court, in sight of the buildings situate on the south face in one direction, and the men's apartment, overhanging the adjacent structures, in the other (Fig. 83). As the walls at this culminating-point are thicker than anywhere else, it has been conjectured that they were also loftier. Every detail about this apartment, the largest in the palace, points to its exceptional importance; its façade, like the front of a Greek temple, was approached by two massive stone steps dressed fair, which led from the court into the fore-room; its entrance, moreover, stood exactly in the middle of the northern side of the court, the architect having taken pains to impress the beholder with the noble arrangement of his entrance, and further to enhance the effect he called in, as will be seen by and by, all the resources known to the decorative art of the period. This was in fact the Homeric megaron, or reception-room, where the master received his guests. The plan of its fore-room, or ante-chamber, is the same as that of the two propylæa, *i. e.* of the *templa in antis*; the bases of its two columns and its two antæ are still *in situ* (Fig. 84). This porch or fore-hall is connected with the second by three doors, whose thresholds of huge blocks of breccia are still in position. The holes for the hinges found at the outer edge of the ground-sills prove that the doors when opened rested against the massive uprights of timber, and thus facilitated free and easy circulation to and fro. Wood played a great part in the ordering of this room. It constituted the end wall of the spacious ante-chamber and the upper part of the antæ. On the upper face of the great stones, placed against the heads of the walls, at either side of the porch, a border of about thirty centimetres has been smoothed around the edge, and over it appear five round holes. The remainder of the surface is left in the rough, and raised some inches above the surrounding band. Hence the conclusion is forced upon us that the surface of this lower block was not designed to receive a second stone, and that the upper portion of the anta was composed of five uprights fixed by tenons into the holes of the base-block. We might also suppose that transverse beams were laid on the stone plinth and extended along the whole length of the wall, as in the similar buildings at Troy and Mycenæ. The side-walls of the vestibule perhaps also the foot of the wall, but certainly the

portion above the stone plinth, were wainscoted with wood. Was this a mere backing for metal plates? We reserve our answer for a future chapter.

The second vestibule has two entrances. The one on the left opens into the bath-room, of which more anon; the other stands in the axis of the building, and bears no trace of closing doors; a curtain fastened to the lintel could be drawn aside when required. The door gave access to the great hall or megaron, in length eleven metres eighty centimetres by nine metres eighty centimetres in width, covering a surface of 115 square metres;

FIG. 84.—Western anta of vestibule of the megaron.

that is to say, it exceeds that of most Grecian cellæ, not excepting that of the temple of Theseus at Athens, which barely reaches seventy-five square metres. The roof of this vast apartment was supported by four columns; whereon, too, rested the massive beams intended to carry the joists of the covering. The bases of these columns, with a diameter of sixty-eight centimetres, are still preserved; that of the shaft, sixty-six centimetres, is obtained from the circle it has left on the upper face of the stone. Within the circle the surface is in pretty good condition; but the surrounding edge shows marks of fire and of the weather. "It is clear, then, that the pillars were of wood, and their dimensions smaller than those of the bases."¹ In the middle of the room

¹ *Tiryns*.

is a circle measuring three metres thirty centimetres in diameter, surrounded by four pillars which helped to support the roof. That it marks the site of the hearth is scarcely open to question. Throughout antiquity, the hearth was the central point, the ombilic, as it was styled by poets and philosophers, around which sat the household whilst the food was being prepared. Of the hearth strictly so called, nothing remains; but from traces of a thick clay coating extending around the circle, it is conjectured that the hearth itself was built up to some height above the ground with brick and mud. It afforded a convenient footstool whilst the hands were stretched out towards the fragrant fire of pine-wood.

Granting the site of the hearth, it became necessary to provide an opening over it for the escape of the smoke, which otherwise would fill the room and make it unbearable. Outlet through the door, or through slits in the side-walls, or between the rafters of the loft, would do something to clear the apartment, but not enough. A square hole in the roof would not only meet the case, but serve to ventilate the room; this, however, though very well in fine weather, would not work in winter, just when a fire is most needed, for it would not only let in the cold but the rain, which would put out the fire. That it can rain heavily in Argolis I have experienced more than once. The builder's art of that period was sufficiently advanced to cope with this difficulty. We might suppose that a "lantern," like the openings which the Armenian peasantry, says Botta, place in the centre of their roofs, was erected here in the shape of a small dome, open at the top, which served at once for window and chimney.¹ The plan proposed by Dörpfeld, which he calls the "basilican mode," is different, and may be thus explained. He raises the central portion of the roof in the longitudinal section of his restored megaron (Pl. III.), *i. e.* that which is comprised between the four columns around the hearth, and therefore immediately over it. Large or narrow slits could be made at will in the vertical walls of this species of lantern, for the entrance of light and the escape of smoke. Egypt was familiar with this mode of ventilating and lighting a vast apartment, and this was the system adopted by Chipiez in his restoration of the Great Hypostyle Hall at Persepolis. Either way, by a lantern or a louvre, they got what they

¹ A plan of the lantern in question will be found in *History of Art*.

wanted, and sufficient light poured in upon the portion of the hall usually occupied by the inmates. We must next ascertain what kind of roof was placed over this and the other buildings of the palace. From indications to be distilled out of the Homeric poems, and the mode of roofing prevalent at the present day in the country, we may safely assert that none but flat roofs were placed over the building, which in summer might be used as a rough shake-down. This is all that can be urged with any certainty, for the walls have lost their coping and the pillars their capitals. Hence a restoration of the frame-

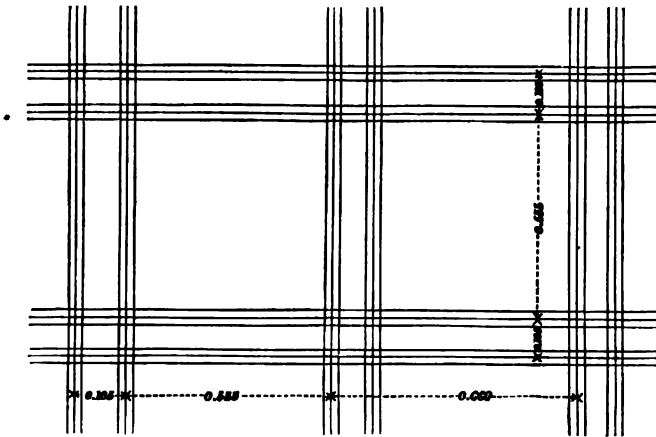


FIG. 85.—Decoration of pavement in the megaron.

work must be conjectural to a large extent, and Dörpfeld has not cared to commit himself thus far.¹

If the ruins give us no hint as to the nature of either roof or ceiling, the pavement, as has been shown, is fairly well preserved. The concrete floor of the second vestibule is quite plain, but that of the fore-chamber and the megaron has a design made up of sunken lines, which bisect one another at right angles and divide the surface into squares (Fig. 85), within which are distinct traces of red colour. On the narrow bands separating these are evanescent scraps of blue. "Hence the inference that the floor was originally of a bright simple carpet pattern."²

¹ A restoration has been essayed by Prof. MIDDLETON, in *Hellenic Studies*, entitled, *A Suggested Restoration of the Great Hall (megaron) in the Palace of Tiryns*.

² *Tiryns*.

In the ruins of a later building erected on part of the site of the megaron, foundations have been traced stretching from one of the columns of the men's apartment to its east wall, in one direction, and in the other to the entrance of the vestibule. This carries us back to a time when the palace was a mere heap of ruins. According to Dörpfeld, the foundations under notice are those of the Doric temple already referred to, of which architectural fragments, a capital and antefix, for example, have been

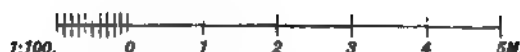


FIG. 86.—Plan and transverse section of the bath-room.

recovered. The character of these pieces is of such a nature that no historian of Greek architecture can afford in the future to neglect them. If they do not supply him with the means of restoring the entire order, they permit him to guess a Doric style older than any hitherto known, whether in Italy, Sicily, or even that of the temple of Hera lately discovered at Olympia.¹ Setting aside these ancient ruins as foreign to our present subject,

¹ Thus, in the temple of Hera the relation between the abacus and the shaft of the column is as of $1\frac{1}{2} : 1$, whilst in the Doric temple this relation is as of $2\frac{1}{2} : 1$.

we will return to the palace. The door opening in the west wall of the second vestibule gives access to an apartment which, though small, is one of the most interesting portions of the unit (Fig. 86). The floor is formed by a single gigantic block of limestone, four metres long by more than three metres broad, and in thickness averaging seventy centimetres. Its weight is estimated at about 20,000 kilogrammes. Its rough edges ran under the masonry of the four walls enclosing the chamber; along these extended a narrow border, raised three centimetres above the finely-polished rectangle in the centre, measuring three metres five centimetres in length by two metres sixty-five centimetres in breadth. At stated intervals along this border, holes appear in pairs; their function was evidently to receive the tenons which served to fasten the lining. The wall shows that this lining was of wood; under the action of fire some of the stones have been reduced to lime, and the clay mortar has been turned



FIG. 87.—Clay pipe of conduit.

into bright red terra-cotta. The dimensions and the number of the wooden boards have been inferred from the intervals parting the holes. One might be tempted to seek here a large reservoir for the use of the megaron; but a door in the south wall shows that this cannot be the case. This door no longer exists, as the whole of the wall has been destroyed; but its former existence is implied from the fact that no holes exist along a great portion of this wall. That it was a room is certain; but a room of a peculiar kind, built for a special use. This is shown by the monolith forming the floor, so as to obtain a surface that could not be damaged by perpetual flooding, and a conduit built of earthenware pipes which passed under the eastern wall and carried off used water (Fig. 87), as well as from fragments of a terra-cotta bath found in this chamber, which when put together formed a tub like those in use at the present time. It is self-evident, therefore, that we have here a bath-room. The

tub in question had a broad rim above and stout handles at the sides; the inner decoration consisted of spirals dear to Mycenaean art.

A whole series of passages skirt the bath-room, and with many bends wind round the megaron, leading to a small court with colonnades and adjoining chambers, which latter have no direct connection with the main court. This block is doubtless the women's dwelling, or *gynæceum*. As in the men's quarter, here also the principal apartment or female megaron was on the north side of the court (o). On account of its smaller dimensions, five metres sixty-four centimetres by seven metres sixty centimetres, there are no columns between the antæ or in the hall around the hearth. The existence of the latter is inferred from the fact that the central portion of the chamber has no floor. The manifest simplicity in the ground-plan of the women's apartment does not extend to the decorative scheme, which to all appearance seems to have been as carefully thought out and executed as in the other parts of the building. On the floors are scraps of coloured patterns, and the walls retain traces of painting. In the other divisions of the unit, fragments of painted plaster have fallen from the walls which they formerly adorned, and are found mixed with the potsherds strewing the floor. A corridor surrounds the women's hall, where they sat together busy with needle and distaff. Parallel to the women's apartment, on the right hand of the corridor, are several apartments, and at the back of these a second passage, and other smaller rooms. They constitute the sleeping apartments of the household, and occupy the whole of the north-east corner. The larger were the bed-chambers of the masters, in the others slept attendants of either sex.

The plan of this building can be fairly read on the ground; but this is not the case with the space intervening between the northern circuit-wall of the citadel and the farther end of the two megarons. Here a maze of walls has been discovered, crossing each other in many directions; but it is impossible to reconstruct their plan. We may assume that they served as kitchens, stores, and perhaps rooms for domestic servants. There is the same uncertainty, the same confusion in respect to pieces of older walls south-east of the women's megaron. The women's quarter was connected with the outside world by a long passage debouching at the back of the great propylæum.

As our aim was to give a clear idea of the peculiarities of this unit, walls, here decidedly belonging to later times, there older than the palace itself, have necessarily been dropped out of our account, because they have nothing to do with the subject in hand. The lighter colouring adopted by Dörpfeld to indicate the more ancient walls has not been followed by us in Pl. II. These traces of an older epoch point to a primitive community domiciled here hundreds of years before the folk that built the palace, and probably also the enclosure against which it leans. Remains of this earlier hamlet were more particularly found in the south-west corner of the middle citadel (z), where, about three metres thirty centimetres below the bath-room,¹ and under portions of the ramparts, a floor of clay concrete was discovered, along with partition-walls indicative of small chambers, and fragments of a rude monochrome pottery mounting back to the beginnings of the art of the ceramist.

This lower stratum might be brought to light by breaking through the floors and pushing on to the solid rock ; but its poor feeble remains, void of character and interest, would ill repay the trouble ; whereas the plan of the palace, the decoration and the products of human industry found among its ruins, reveal a condition which has made considerable advance in cultured ways. Our interest is heightened because of the relations which we seem to perceive between the building exhumed by Schliemann and the Homeric palace, such at least as we picture it from allusions found in the Epic respecting the internal arrangement of the houses inhabited by Priam and Peleus, Nestor and Menelaus, Alcinous and Ulysses. It seems best, however, to postpone our discussion in regard to the real character and close analogy of this mansion to the very similar buildings at Troy and Mycenæ until the end, when we shall have gone over the remains found in superabundance in the latter city.

The materials composing the walls of Tiryns are many kinds of stone, clay, wood, and lime. That which holds the largest place is a compact limestone, whence unsquared and squared blocks were obtained. The former, generally of gigantic dimensions, were used in the foundations and circuit-walls ; the latter went to the making of thresholds, bases of columns and antæ, flights of steps, floors for bath-rooms, and the like. Breccia, that

¹ DÖRPFELD, *Athenische Mittheilungen*, 1891.

is to say, a siliceous conglomerate, has given thresholds and the massive jambs of the gateway leading to the upper citadel; its hardness and the fact that it is less easily cut than limestone accounts for its having been seldom employed. It is the same with sandstone, which only appears once, in the first step mounting to the men's apartment. As a rule, the stones with which the walls are made are set in clay mortar, mixed with straw or hay. The interstices left by the irregular blocks are filled in with smaller units. It is owing to the colossal size of the blocks and the thickness of these fortification walls that they have lasted until our day, and are likely to endure centuries longer. This does not apply to the inner and external walls of the domestic dwellings, whose insignificant mass could not be relied on to support them. Here stability was assured and damp kept out by a foundation of unsquared stones, rising to the height of one metre above the ground. Above this kind of plinth the wall was continued with crude brick mixed with straw, which has crumbled into dust. If these bricks have been found in a fragmental condition in the chambers, and entire in the women's megaron (o) and the courtyard north-east of court N, it is because during the conflagration which destroyed Tiryns they became red, and were baked so hard as to have been taken for bricks that had passed through the kiln. Closer scrutiny, and above all comparison with very similar finds at Mycenæ, Troy, and elsewhere, has dispelled the error. It was discovered that the squares are imperfectly and irregularly baked; the portions next to the woodwork are almost vitrified, whilst the rest of the mass is of a pale pink, and presents a feeble cohesion. Here and there the clay mortar with which the stones are bonded is found calcined, as I satisfied myself on the spot.¹ Hence the conclusion becomes irresistible that the bricks were already set up in the wall when overtaken by the fire.

To account for the clay having been so deeply modified, we must assume that wood held a large place in the building. The massive roof framing which carried the ceilings of the two vast megarons was made of it; so too were the door-cases and

¹ Some were incredulous as to the composition of these walls, and the traces of fire upon the bricks. At the request of M. Nicolaidis, a new analysis was made before a committee appointed for the purpose, when Dörpfeld's view was unanimously recognized as correct (*Athenische Mittheilungen*, 1891).

the wainscoting of certain apartments, and of timber had been the columns, for though all the stone bases are in position; not a single scrap of shaft or capital has been discovered. Even if we grant the simultaneous burning of all the timber not immediately in contact with the wall, it will hardly suffice to explain the radical change which the latter underwent. Here, as at Mycenæ and Troy, wood beams laid longitudinally at fixed intervals between the courses constituted an important element of the wall. These timber pieces have of course been either carbonized by fire or destroyed by the weather; but wherever the wall is in good preservation, the hollows they have left behind are filled with that surest of signs, charcoal and ashes.

A wall made of stone, clay, and wood could not long have resisted the destructive effects of the atmosphere; its aspect moreover would have been poor and mean in the extreme. Hence, with the exception of the circuit, both faces of the walls were overlaid, first with a coating of clay, so as to get an even surface, and next with a thin layer of lime some two centimetres thick. This was smoothed over and painted. That the wall-paintings were executed on the moist plaster is certain, for here and there are little roughnesses caused by the brush whilst the lime was moist. Notwithstanding the work of destruction which went on here during thousands of years, there are very few rooms that have not preserved fragments more or less considerable of the original plastering. The old painting, however, has almost entirely disappeared, except in the women's hall, where faint outlines of the design, if not the colours, are still distinguishable. All the rest has been washed away by the rain which, as it fell on the height, trickled down on the roofless walls and destroyed their bright veil. Fragments of this stuccoed-decoration have mostly come from the apartments situated north-east of the bath-room, where they were discovered under a thick layer of rubbish; this, by excluding the damp, helped to preserve their colours. The least damaged had their painted faces turned to the floor.

Of these the most valuable have been sent to the Athenian Museum, where I examined them; but the bulk of the fragments in question was left in the keeping of the custodian of the ruins.

Mural-painting was by no means general, and would seem to have been reserved for the inner walls of the more important

apartments. The outer walls, as well as the secondary chambers, both internally and externally, were panelled with a monochrome plastering. From observations made at the time of the disinterment of these plastered scraps, it has been proved that only five colours were employed—white, black, blue, red, and yellow. We reserve our description of the patterns found here for a subsequent chapter, which will deal with the processes and forms employed by the Mycenaean artist to decorate his buildings. For the present we will confine ourselves to a few remarks.

Geometric designs, made up of horizontal and vertical bands, circles, and dots, hold a prominent place; but this is not all. The painter also derived his inspirations from such types as he found in the vegetable and animal kingdoms—leaves, rosacæ, and other flowers; star-fish, bulls, and even men. Faint traces of great winged figures are not rare; unfortunately, the poor state in which they are found does not lend itself to a complete restoration; but in these mutilated remains we guess imaginary beings analogous to those types that play so great a part in the creations of Egyptian and Chaldaeo-Assyrian art. Nor were these the sole elements that entered into the scheme of the Tirynthian ornamentist. His resources were much greater than might have been supposed from the constructive mode displayed in the walls. He not only looked to fresco-painting to vary the aspect of the inner and external walls, but in calling in the help of different substances, he obtained contrasts of colour by opposing one shade to another. Wood, according to the kind of tree whence it comes, furnishes, here lighter tints, there colours of a sombre hue, and bronze plates in all probability further heightened the effect. The surfaces which they covered no longer exist, and oxidation has destroyed the bronze; but the plating has left its mark on the polished slabs of the domed-graves at Mycenæ and Orchomenos. That we are justified in applying to the house conclusions deducible from the tomb, is incontestable; in both the architect has introduced blocks whose vivid tones are trenchantly relieved against the dull grey of the limestone. From two friezes have come fragments of applied ornaments of this nature; one consists of very hard green stone, and the other of alabaster; the latter still retains in the hollows of the rosettes scraps of a vitreous paste of a fine blue colour. We have already said how the floors were enlivened with gay tints.

Having now gone over the plan, internal arrangement, and polychrome decoration of the building in as succinct a manner as possible, it remains to determine the age to which it belongs. The first thought which comes up to the mind is that the palace is contemporaneous with the enormous walls surrounding it, walls which the Hellenes of the fifth century B.C. viewed in the light of a mysterious and strange legacy from a pre-historic age, reputed to be the work of superhuman builders called Cyclopes. When the building was discovered, doubts were loudly expressed as to its having any claim to be considered old; the palace—its very title to the name was scouted—was attributed to the beginning of our era, and consequently almost modern. The objections raised against it appeared in a series of letters in the spring of 1886, written by Stillmann, the *Times* correspondent in Greece. He was supported by Mr. Penrose, of the English School at Athens, the author of the great work on the curves of the Parthenon, and by others. The matter was referred to a Special General Meeting of the Hellenic Society,¹ Drs. Schliemann and Dörpfeld being present by invitation. To the objection that walls of quarry-stones and sun-dried bricks were unworthy of the heroic age, Schliemann, and after him Dörpfeld, pointed out that such walls had been found in admittedly pre-historic buildings all over Greece, that the wall-paintings of the Tirynthian palace exhibited the very same archaic designs as the Thalamos at Orchomenos, whose antiquity was not in dispute. As to the stone-saw, pick-axe, and cylindrical bore being proofs, as contended by Stillmann, that these walls were the work of Celtic barbarians who overran Greece in the third century B.C.,² they on the contrary were a sure test of age, and the very instruments whose employment characterized the domed-tombs and the Lions Gate at Mycenæ. Finally, Stillmann's alternative theory that the building was contemporary with the Byzantine church and the tombs adjoining it,³ must likewise fall to the ground when confronted with the actual state, the position and

¹ See the *St. James's Gazette*, July 3, 1886, the *Times* of the same date, and the *Builder*, July 10. The latter gives a detailed account of the Special General Meeting. A more concise one appears in *Hellenic Studies*, 1886, pp. liii-lxi.

² Stillmann's theory, set forth in a series of letters addressed to the *Times*, April 1886.

³ His alternative theory, which was read in a paper sent to the Special Meeting of the Hellenic Society, where he pleaded inability to appear.

nature of the ruins. In the end Mr. Penrose accepted the invitation of MM. Schliemann and Dörpfeld to settle the question at issue on the spot. It was not hard to convince him that the masonry of the inner and external walls was identical; though in the one case rubble and in the other colossal stones had been used—a natural distinction between the walls of a house and of a stronghold intended to withstand the assaults of the enemy. Dörpfeld pointed out that the early walls of the Hellenes, both in Asia Minor and Greece, were invariably composed, as at Tiryns, of irregular stones with or without mortar. Potsherds of glazed pottery, kiln-burnt bricks, and lime mortar had all come from the church and adjacent graves, whilst in the palace itself sun-dried bricks alone had been found; that appearances which had been attributed to the presence of baked bricks and lime mortar were due to the fire which had destroyed the palace. The objections were withdrawn, and Mr. Penrose declared his change of front in a straightforward letter which appeared in the *Times* and was reproduced in the *Athenæum*.¹ We know not what Stillmann's views may be to-day, but among archæologists whose opinion counts for anything, there is not one who has not come round to the interpretation advanced by the excavators, supported as it is by cumulative and well-established facts.²

It is needless to insist on the theory of a poor critic such as Stillmann has shown himself to be; nor is it possible to take seriously one who can leap at a bound from the Macedonian epoch on to full mediæval times, as if it were one and the same thing. All we can say is, that he cannot know much of the subject he is treating. On the other hand, the perfect correspondence of the Tirynthian palace to the similar buildings at Troy and in Greece proper, cannot be sufficiently emphasized; be it in the plan of the edifice, with its propylæa, its courts, and halls supported by columns, or its megaron with central hearth, or the timber beams embedded between the stone courses of the lower portions of the walls, with the mistaken idea of making them

¹ *Athenæum*, Nov. 12, 1887. Schliemann himself sent Penrose's letter to the *Times*, where he had been attacked.

² Relating to this controversy, are two letters addressed by Stillmann and Dörpfeld respectively to S. Reinach, June 20 and Nov. 26, 1887. They were reproduced in the *Revue archéologique*. In the same volume is an excellent summary of the whole controversy, from beginning to end.

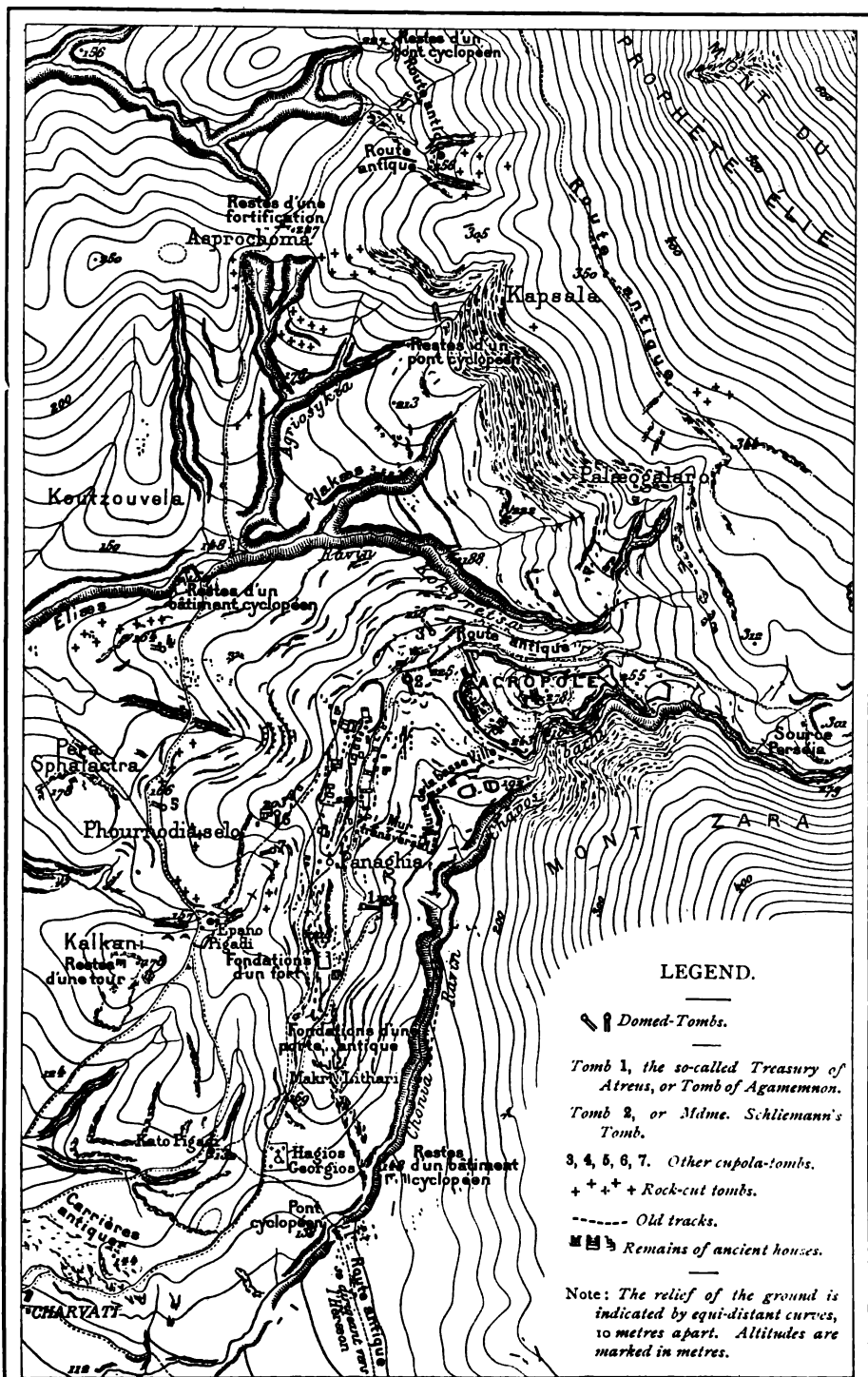
more durable, down to its sculptured and painted decoration. We shall return later on to this peculiarity of the early builder. It is the trace of these so-called Cyclopæan walls, lately mistaken for ruinous mediæval or modern structures, that I studied and followed three or four years ago in the Mycæan palace on the top of which a Doric temple had built itself in the sixth century B.C.; a few weeks after I was shown them again, under the name of "Pelagic walls," on the acropolis of Athens, where they had been covered by structures of the age of Cimon and Pericles; finally, I beheld them at Troy, as they emerged under the spade of Schliemann's workmen, from mountains of rubbish. The fact that the peasantry of the Eastern world still build the walls of their houses and those fencing them in precisely the same style, is sufficiently accounted for on utilitarian grounds; so easy and quick a way of going to work was likely to be retained. The remark applies to the situation occupied by the masonry under discussion in the lower part of the wall, where it came in contact with the humid ground. Above this species of plinth, large square bricks dried in the sun were piled up, both at Mycæ, Troy, and Tiryns. Shall we then refuse to believe the testimony of our own senses, and not admit that this style of construction was practised by the Hellenes at a very early date? Finally, at Troy, where the middle portion of the wall is in a better state of preservation than at Tiryns, we could distinctly make out the traces left by longitudinal and sometimes transverse timbers, which the primitive builder had inserted into walls of rubble or crude brick. The coincidence extends further still. The Mycæan architect, like he of Orchomenos, fetched from outside, whence, nobody knows, beautiful and precious stones, or deemed so because rare and seldom seen, which he added to the common ones he had at hand, constituting the body of his structure, in order that his surface should present a richer and more varied aspect. We find this same striving after effect in the two friezes above described; one cut in alabaster, and the other carved in hard, green stone. Alabaster was used at Tiryns to adorn the lower portion of an inner wall; the flagging of the Mycæan megaron was of the same substance. The same remarks equally apply to other parts of the building, where common materials alone were employed. Thus, the ground-sills of the principal doorways and the angles

of the building are provided with regular calcareous stones or breccia, whether at Tiryns, Mycenæ, or Troy, whilst the body of all the walls is composed of rubble and crude brick ; but the coarse material is everywhere thickly plastered to receive a polychrome decoration which the painter could make as rich as he pleased.

Nowhere is the harmony in question more striking than in the decorative scheme. Fuller verbal details, however, would add little or nothing to the notion that may already have been formed. In order to carry conviction the eye must be appealed to, after the fashion adopted by Schliemann in his book on Tiryns, where side by side of the most precious fresco-paintings from the latter city, he juxtaposes ornaments borrowed from Mycenæ and Menidi, Orchomenos and Spata. In all are found the same style and taste, the same preference for spirals, and the endless combinations to which they give rise. There is not, so to speak, a single ornamental form at Tiryns but which is met elsewhere, be it in this or that building referred to above, or on some of the wares composing the furniture of the Mycæan tombs, and other funerary monuments of the same epoch. The same conclusions would be reached, were this the place for overhauling the small terra-cotta figures and broken pottery which in the course of the excavations were collected at Tiryns. We could easily prove that their technique is identical with that of similar wares picked up in the town, as well as in and around the domed-tombs of Mycenæ. But we deem our demonstration sufficiently complete, and in no need of such dallying minutiae. We are now in a position to approach the Mycæan monuments without any misgivings as to the age which should be assigned to the ruins of Tiryns, consequently we are justified in comparing them the one with the other, in order that we may bring out the peculiarities which serve to define the art of Achæan Greece.

Mycenæ.

There was no more difficulty in identifying Mycenæ on the ground than there had been for Tiryns. The indications of ancient writers as to its site are precise and clear ; led by them



After STEFFEN and TSOUNDAS.

Scale
0 100 200 300 400 500 mètres

L. Thuillier, del.

FIG. 88.—Map of Mycenae territory.

early explorers easily found ruins of considerable extent, which coincide in every respect with the notion gleaned from historical data respecting the structures at Mycenæ (Fig. 88). Apart from this, the description of Pausanias, though extremely brief, is of so distinct a character as to suit Mycenæ and Mycenæ alone. "A portion of the enclosure wall," he says, "still remains, and the principal gate, with the lions over it. These [the walls] were built by the Cyclopes, who made the wall at Tiryns for Præteus. Among the ruins at Mycenæ is the fountain called Perseia, and the subterraneous buildings of Atreus and his children, in which their treasures were stored."¹ The citadel wall is still extant, and betrays the hand and methods of the builders who worked at the Tirynthian rampart. Now as then, the lions, rigid and fierce, watch over the entrance to the fortress, and the spring which refreshed legendary heroes is no less copious or sparkling than of yore. Like Pausanias, the modern traveller notes admiringly the clever scheme and the building material of these lofty domed erections, wherein, said tradition, the Pelopidæ hoarded their gold.

Homer graphically describes Mycenæ as lying "in the depth of the horse-feeding Argos."² It commands the north corner of the plain, and is not far from the pass overhung by Mounts Karneites and Eubœa, where abutted the roads that led to Phlius, Cleonæ, and Corinth (Fig. 67). Mycenæ is ten kilometres (5·8 English miles) distant from Argos, on the lower spurs of Mount Eubœa, and is flanked by its highest peaks, the Prophet Elias (2,646 feet) on the north, and the Zara (2,160 feet) on the south.³ The hill of the acropolis in height is 278 metres (911 feet); its length is about 300 metres, and 200 metres or thereabouts at the base; it forms an irregular triangle whose summit is turned to the east. On this side a narrow ridge connects the rocky mass with the Prophet Elias; on the west a broader isthmus joins the citadel to one of the many platforms upon which rose the buildings of the lower town. To the north, and more especially southward, the cliff falls off precipitously into

¹ PAUSANIAS, II.

² *Odyssey*, ii. 263: ἐν μυκῇ Ἀργεὺς ἵπποβοότῳ.

³ In regard to the topography of Mycenæ, see Capt. Steffen's two excellent maps drawn for the German Archæological Institute, *Karten von Mykenai*, &c. The scale of the Mycenæ map is of 1 : 12,500, and that of the acropolis of 1 : 750.

a ravine, at the bottom of which winds the bed of the Chavos, which is nearly dry during the greater part of the year, because it is only fed by the fountain Perseia; it rises about half-a-mile north-east of the citadel, 291 metres above sea-level. In the rainy season the Kokoretza, or north ravine, becomes for awhile a roaring torrent, leaving behind a mass of sand and pebbles, and the rocky walls on either side as gloomy and destitute of trees or herbage as before (Fig. 89).

The first warlike tribe that fixed here its abode could not but have noticed the natural advantages of its situation. "Argolis," says Homer, "is very thirsty";¹ and the epithet applies to it with equal force at the present day. It has no gushing springs except on the narrow strip stretching between the sea and the mountains along the western coast of the bay. In summer, save when Zeus sends rain, no water is seen in any of the rivers, not even the Inachus. In such a region the possession of a perennial spring whose waters could be conveyed to the foot of the citadel and up the sides of the Cephissus valley, for irrigation purposes, must have been an inestimable boon (Fig. 90). The tongue of land along which must have passed the aqueduct, to reach the rugged cliff turning its northern side, could be easily barred by a fortification wall; on its narrow crest, moreover, the enemy could scarcely have found room to station himself. On every other side the citadel hill is almost completely isolated, whilst if crowned by walls, the north and south faces could defy any attempt at scaling them. The only accessible point along the whole perimeter occurs on the western side, where the space parting the two ravines is somewhat broader; where, too, the cliff dips more gradually. To ensure complete security, fortification works would be wanted, especially on this side; for granting that a city should rise under the protection of the fortress, this region alone would furnish space enough for commodious houses, broad streets, and gardens. The creation of wealth would awake the desire to guard the abodes both of the living and the dead against sudden aggressions. The town would then be surrounded by a wall, which henceforth would act as an advanced post, whilst its mass would cover the weak portions of the fortress defences.

The founders of the Mycenaean castle were not slow in availing themselves of the indications presented by the configuration

¹ *Iliad*, iv. 171: πολυδίψιον Ἄργος.

FIG. 89.—The Mycenae acropolis from the south-east.

and relief of the ground. The enclosing wall began from the point where the escarps of the Chavos cease; it ran along the edge of the hill, a trifle above the middle of its height, its line being broken by irregular resaults and many re-entering angles. The fortifications enclose an area of far greater extent than either that of the Trojan, Tirynthian, or Athenian acropolises.¹ Assuming the Mycenæ circuit to be level, instead of barrel-shaped as it is, it would measure about 30,000 square metres; whilst with the slopes the figure would be higher still. Accordingly, the Mycenæ acropolis is by far the most spacious of any known at that remote period, and its stupendous fortifications correspond with the tales which tradition had retained of the wealth and greatness of its ancient masters (Fig. 91).

The citadel wall has been preserved almost along its whole circuit, with the exception of a piece towards the south-west, over the vertical escarps of the Chavos ravine, where its line was broken by a landslide; at this point some few blocks, which crop up here and there, alone enable us to follow its direction. Elsewhere it preserves, with varying aspect, a height averaging from four to ten metres. The style of building exhibited here falls under three heads: (1) masonry which closely resembles that of the walls of Tiryns, consisting of unsquared or very imperfectly squared blocks, but of smaller dimensions throughout. Contact between the single units being partial, they leave gaps which are filled out with smaller stones shoved in between them (Fig. 92). Here and there the presence of blocks dressed fair on all their faces betrays a later period, so that on the whole the walls at Mycenæ have a less colossal appearance than those at Tiryns. This, however, apparently the oldest or Cyclopæan style, forms the greater part of the circuit, and is in strong contrast with the second system of masonry, which is seen in the bastions flanking the gateways and the passages leading to them, as well as the redans, or maybe tower, on the south front, where the lining slabs are rectangular in shape, and set out in regular courses with vertical joints (Fig. 93). (3) Polygonal masonry is found south of the Lions Gate (Fig. 90, 1), farther on in the same direction, and at the north-east of the circuit. The blocks are cut with even greater care than in the second system, and

¹ Measured horizontally, the area of the acropolis at Tiryns is *cir.* 17,000 square metres.

are fitted with the utmost nicety; horizontal beds, however, are out of the question. The stones are of varying size and form; each seems to be cut of the required shape in order that its projecting angles shall marry the re-entering ones of the contiguous units on the wall surface. The polygons thus constitute a net-like structure of indestructible firmness and solidity (Fig. 94). In this fashion is constructed the wall which circles in front of the graves on the acropolis discovered by Schliemann; as also a species of tower to the southward (Fig. 90, 1), and again towards the north-east extremity of the fortified enclosure.

Wherever the wall has kept its two faces, its thickness varies from three to seven metres; on two points, however, north and south, it has been ascertained, from the fragments still lying on the ground, that the primordial depth of the rampart was as much as fourteen metres. The only possible explanation of this exceptional bulging out is that at these points the walls were pervaded by inner galleries akin to those of Tiryns (Figs. 74-78). These passages may have been similar to our casemates; the structure on this side, however, is so hopelessly ruined that nothing can be asserted. The case is different in the north wall. There (Fig. 90, 1) Schliemann at first thought, with much show of probability, that the entrance to the gallery (Fig. 95) led to a series of chambers.¹ Later excavations have shown that the real purpose of the structure was to provide a covered passage between the acropolis and the upper portion of the aqueduct conveying the water of the Perseia;² so that the existence of the latter should remain secret and unknown to the enemy, and that the inhabitants of the castle should not be reduced to the uncertain supply from the three cisterns, which are partly rock-cut and partly built, on the acropolis; these, though of good size enough, would prove very inadequate in a long siege,³ and not save

¹ SCHLIEMANN, *Mycenæ*.

² TSOUNDAS, Report in *Πρακτικά της ἀρχαιολογικῆς ἐταιρείας*, 1889.

³ STEFFEN thinks that the aqueduct passed near the Lions Gate and entered the interior of the citadel. We believe with BELGER that excavations carried on in this region of the acropolis have not made good the assumption. No pipes have been discovered front or back of the gate in which water under pressure could have risen to a level approaching that at the point of outlet. As may be seen from Steffen's map, the Turkish aqueduct, which he is inclined to think follows the line of the old one, turns the north-west corner of the circuit at a much lower level than the ground-sill of the Lions Gate and the esplanade close by. The water-supply was conveyed to the town.

2 4 1

FIG. 90.—Map of Mycenæ acropolis.



the defenders from agonizing thirst. The engraving (Fig. 95) represents the opening of the passage in question. Stone steps,

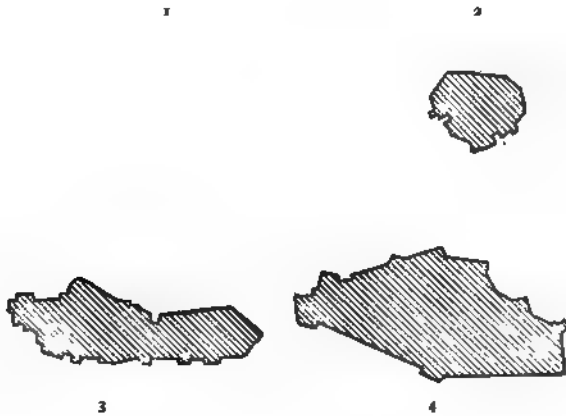


FIG. 91.—Relative size of four acropolises: 1, Mycenæ; 2, Troy; 3, Tiryns; 4, Athens.

eleven of which were cut in the wall, and other twenty-three in the flank of the hill, led to a square basin one metre eighty-four centi-

FIG. 92.—Mycenæ wall.

metres at the side, and three metres seventy centimetres deep. Earthenware pipes, of Hellenistic or Roman times, were laid

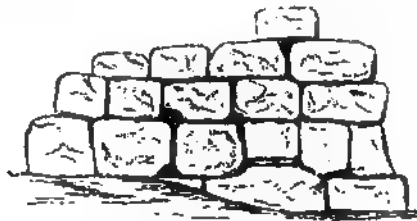


FIG. 93.—Mycenæ wall.

down at the outlet to convey the water where required. They show traces of frequent repairs; the folk settled on the site of the old town were naturally interested in keeping the conduits in

order, so as to have a constant and ample supply of water ;¹ the citadel however, even for the ancients, had been so long silent and desolate, that we may safely infer both passage and steps as belonging to the Mycenaean epoch, when the defence of the acropolis whereon the kings and their families were domiciled was of supreme importance. Troy and Tiryns afford examples of stairways and galleries contrived inside the walls ; but there

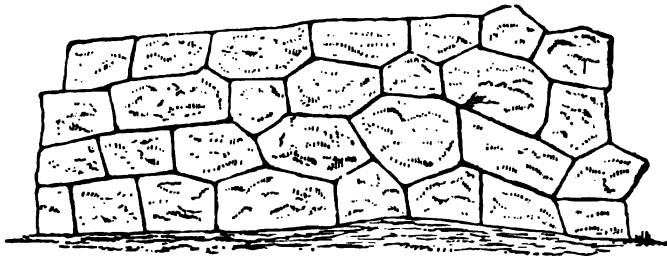


FIG. 94.—Mycenæ wall.

they led to posterns intended to facilitate a sally ; here, as we have shown for Amasia, in Asia Minor, their purpose was of a purely economic nature.² The passage we are considering has a mean height of four metres fifty centimetres, by one metre fifty centimetres in breadth. Its construction is that which prevailed at that remote period. At the entrance, each successive ring of stones is set in advance of the one below, and the

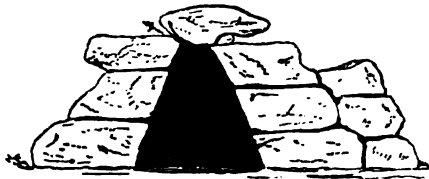


FIG. 95.—Entrance to passage contrived in the north wall.

gallery rises to the usual acute arch ; by the reservoir the roof is horizontal. The circuit-wall shows traces of two gateways

¹ We have evidences that Mycenæ was inhabited in the third and second century B.C. ; but when and through what circumstances the little town, which in its public deeds styled itself *κώμη Μυκηνέων*, settled here is not known. The words just cited are to be read in two inscriptions, found in 1886, almost on the surface of the acropolis. The date of one is fixed from the name of Nabis, tyrant of Sparta, mentioned in it ; the other appears, from internal evidence, to belong to the same period. Both are written in the local Argian dialect.

² G. PERROT and E. GUILLAUME, *Explor. archéologique de la Galatie*.

—nor does it appear ever to have had more: a minor one to the north (Fig. 90, B), which was turned to the hill (Figs. 96-98),

FIG. 96.—Mycenæ acropolis. Plan of northern gate.

whilst the more important looked on the plain, *i. e.* towards Argos. Through this portal passed royal pageants and religious

FIG. 97.—Elevation of northern gate from the inside.

pomps, all the stir going on between the upper and lower city to and fro. Everything is calculated to convey this notion:

the size of the slabs, the elaborate care bestowed on the construction, and above all the great bas-relief set up on high, like a coat-of-arms, over the entrance. Countless engravings and photographs have made the Lions Gate known to all the world, learned and unlearned alike. Schliemann found the gate choked up to the middle of the bas-relief; he cleared it and laid the threshold bare, but could detect no trace of the chariot-wheels mentioned by several travellers, who, had they existed, for obvious reasons could not have seen them.¹ That

FIG. 98.—Section of northern gate.

did not prevent ruts being reproduced as an established fact in most descriptions of the ruins at Mycenæ. We shall return more than once to the Lions Gate, both for the sake of studying there the art of fortification as it was practised by the Mycenaean military engineers, and of paying our respects to the oldest monument of Grecian sculpture. Viewed in the latter capacity, it forms no inglorious prelude to the noble Art-history of Greece (Fig. 99).

¹ SCHLIEMANN, *Mycenæ*.

FIG. 99.—Perspective view of the Lions gate.



The descriptions and representations of the travellers who visited Hellas early in this century seemed to have exhausted the subject of the ruins of Mycenæ; nevertheless much remained to be gleaned both above and underground. Nobody had noticed, before M. Tsoundas in 1889, the curious contrivance and real purpose of the flight of steps leading to the reservoir. But the researches carried on in the subsoil have more than aught else enriched science with discoveries of unequalled importance, and brought in their rear others, no less startling and no less instructive. Schliemann's memorable campaign of 1876 at Mycenæ marks an epoch in the annals of archæology. The thirty-four shafts which he had sunk two years before on the acropolis had led to no result; but in August 1876, served by a large number of men, he cleared the Lions Gate and opened a trench south of but inside it, prompted thereto by the configuration of the ground, which led him to infer that he should find here the path which formerly led to the acropolis. A fortnight had barely gone by, when, within the obtuse angle made by the wall, a few paces from the Lions Gate, he lighted upon an undisturbed cemetery, where he literally handled the precious metals with the shovel; where, too, no traveller before had dreamt of looking for such treasures on this particular spot. Much has been said about Schliemann's good luck; but chance does not explain everything. Indefatigable explorers have undoubtedly been known more than once to stop work within a few feet of glorious finds, which fell to the lot of others almost with the first blow of the spade.¹ Like other undertakings, excavations have their ups and downs, but nobody will deny that those who have been most successful courted fortune by their untiring perseverance. Had Schliemann allowed himself to be discouraged by the small results of his first campaign, had he not multiplied shafts at every point of the compass, everywhere laying the rock bare, it is quite certain that, like his predecessors, he would have come away empty-handed; and out of the number of would-be explorers, few would have been capable of pointing out to him the spot by the gate

¹ This happened to MM. de Vogué and Duthoit at Athienau, in Cyprus. Their shafts at the Golgos, a few years before de Cesnola's excavations there, had actually grazed without discovering the temple, of which a ground-plan would have been made, and its peculiar details noted down with more care and precision, than was the case by de Cesnola, whose training had not fitted him for the task.

which he singled out for himself.¹ Then, too, hunters after antiquities owe their most brilliant discoveries to a kind of intuition, or "open sesame," in which their competitors are deficient; they are quick to detect some point of coincidence between this or that historical or geographical piece of information, between certain physical features, certain traces of a distant past. To cite but an example: a flash of genius alone could have made Mariette guess that, buried in the depths of sandy mounds, lay the Sphinx avenue leading to the Serapæum. From the western point of the citadel wall, to within a few steps of the Lions Gate, extends a circular space whose uneven surface was due to masses of ruin and silt, where soundings revealed the presence

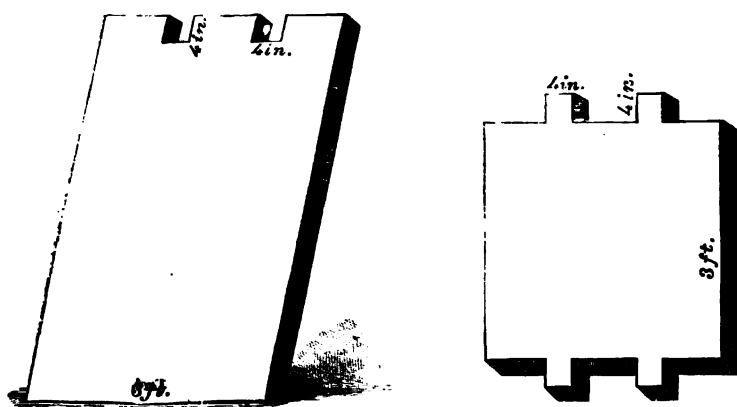


FIG. 100.—Vertical and horizontal slabs of circle. The measurement is in English feet and inches.

of broken pottery of the most rudimentary description (Fig. 90, c), along with limestone slabs, either plain or decorated with curvilinear, animal, and human forms;² some were lying on the ground, but most were still erect, the lower portion thrust in between stones which served to keep them in position. With much ado they succeeded in removing them, so as to allow no interruption with the work in hand. Judging from their tabular shape, their being dressed quite fair, and the nature of

¹ SCHLIEMANN, *Mycenæ*.

² Schliemann mentions water-conduits, built with uncemented stones, and a dozen reservoirs or so, which were said to stand at the entrance of the circle. Steffen's map bears no trace of either cisterns or channels. Belger justly remarks that at this part Schliemann's account betrays the hesitation he felt in regard to the nature of the buildings he had just uncovered. What he took for a duct were paving-slabs of the passage leading to the circle, whilst his cisterns were no more than the space intervening between the two rows of upright slabs.

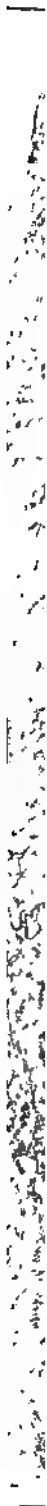


Fig. 101.—Present state of slab-circle.

the bas-reliefs by which they are decorated, Schliemann, who was on the look-out for graves, recognizing in them stelæ, shrewdly guessed that the tombs to which they belonged could not be far off.¹ The discovery stimulated him to greater zeal. As stated above, some few metres from the entrance he came upon a circular enclosure formed by two concentric rings of vertical slabs, connected at the top, on a tenon and mortise principle, by horizontal and smaller stones (Fig. 100). The pressure of fallen earth washed down from above has caused the upright slabs to slope inwards on many a point of the circumference, and has laid low the covering horizontal blocks. There can be no doubt that the former once stood upright; for the faces of both the vertical and horizontal stones are cut at right angles. In height they vary from one metre to one metre fifty centimetres. The intervening space parting them was filled with earth and rubble; and the slabs, which are now the only remaining part of the erection, formed the lining to both sides of the wall, whilst the covering units prevented outward thrust. The stone circle encloses an esplanade twenty-six metres fifty centimetres in diameter. The top of the outward ring of slabs has a bench-like appearance; but it is a deceptive appearance; no one ever made use of that pretended settle, for his legs would have dangled in the air. Pierced in the precinct wall, which faces the Lions Gate, is an entrance with jambs overtopping the balustrade, which gave access to the stone circle. A second doorway may have stood on the opposite side; but this portion has been so disturbed and injured by the excavations and the action of the weather, that the plan cannot be reconstructed with certainty. The best-preserved slabs are found on the north-west side of the circle, where they rest on a sustaining wall; on the other faces they are in direct contact with the virgin rock. All are on the same plan (Fig. 101).

Having cleared the outer rings of slabs and some stelæ close to them, Schliemann found himself, at a depth of three or four metres, within a circular enclosure with other nine stelæ distributed about.² So far every blow of the spade seemed

¹ SCHLIEMANN, *Mycenæ*.

² The aspect of the enclosure after the excavations is well seen in SCHLIEMANN'S *Panoramic View*, Pl. VII., drawn from a photograph. It will be noticed that both stelæ and upright slabs stand on the same plane. If the altar is not figured, it is because, standing at a lower level, it was as yet undiscovered.

to confirm his theory that the royal tombs would be found in the acropolis, and he renewed his efforts. He had Pausanias at his fingers' ends, and remembering what he says of a "stone circle," enclosing altars, and the tomb of Opheltes at Nemæa,¹



FIG. 102.—Plan of altar and tomb above it.

he enlarged and deepened his trench. We may regret that before striking to the very heart of the accumulations, he did not think of making plans and photographs of the group of

FIG. 103.—Perspective view of altar.

monuments he had cleared. In his impetuous haste to sound these depths, he neglected an important duty, and unmercifully tumbled the ground about. Three metres below he came upon a circular block of masonry, stone built and open at the top, which

¹ *Θριγκὸς λίθων*, PAUSANIAS, II.

apparently was an altar belonging to a remote age (Figs. 102, 103, 104), and closely resembling the Tiryns specimen (Figs. 81, 82). His hopes rose with every onward step: had not this archaic altar, he argued, been the instrument and witness of the ceremonies celebrated here in days gone by in honour of the dead? Could doubt be possible, when around and level with the altar, boars' teeth, horns and bones of bulls, goats, and deer were picked up in large quantities, presumably the remains of

Soil surface before the excavations

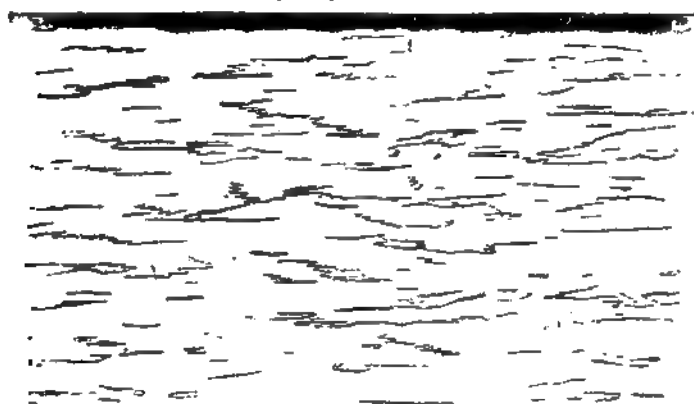


FIG. 104.—Section of altar and grave.

the victims sacrificed here through a long series of years; along with skulls and human bones, one and all proclaiming aloud that they must be near a place of interment?¹

Excavations were pushed on to the rock, and at the end of October a vast rectangular cavity was discovered, eight metres long and nearly three metres broad, which was hewn in the side of the rock. The rain suspended operations for a while; ere

¹ MILCHOFER, *Athenische Mittheilungen*.

long, however, on another point of the works, there appeared a second and very similar excavation. Henceforward fortune

FIG. 105.—Section carried down to the rock of the area enclosed by the slab-circle.

seemed to favour Schliemann beyond all expectations. "At the depth of four metres fifty centimetres," he writes, "below

the level of the upper rock, I reached a bed of pebbles, where I perceived, ninety centimetres distant from each other, the remains of three human bodies. They lay with their heads to the east and their feet to the west; all three were of large proportions, and appeared to have been forcibly squeezed into the small space of only five feet six inches which was left for them between the inner walls."¹

Six tombs in all were brought to light; five by Schliemann to the southward of the circle, whilst the sixth was exhumed in the following year by Stamakis at the expense of the Archæological Society.² There is little or no difference between one grave and another, whether in plan or details. All are rectangular, and hollowed out in the rock; and the bottoms of all the graves are horizontal, but they lie at different levels, according to their position on the slope, the layer of soil being much thinner towards the north than the south side, where it was washed down by the rain.³ Before the ground was disturbed by the excavations, the bottoms of the graves were found at a depth of seven, eight, or nine metres below the upper level.

¹ SCHLIEMANN, *Mycenæ*.

² Schliemann, *Mycenæ*, does not mention Stamakis, who nevertheless, as Government delegate, gave him substantial aid. Keen-sighted and precise, he kept a diary of the excavations, which every one interested in Mycenaean antiquities must wish to see published. The hopes held out by the Archæological Society in this direction, since his untimely death, have not been realized, owing to difficulties raised by the friends of the late archæologist. It might clear up certain points of Schliemann's narrative which have remained obscure. A paper by MILCHÖFER, *Die Ausgrabungen in Mykene*, may be consulted with profit. See also the brief but precise description of FURTWÄNGLER, *Mykenische Vasen*. Nor should Belger's articles which appeared in the *Berliner philologische Wochenschrift*, wherein Schuchardt's book is criticized in no unfriendly spirit, be left out of account. [This is an oversight. Schliemann (*Mycenæ*, p. 30) speaks in the most flattering terms of the technical skill and the aid which he received from Stamakis.—TRANS.]

³ The numbering of the graves is widely different between Schliemann and Stamakis; the former begins with the first grave which he recognized as such, but which is called fifth by the latter, because it was the last to be emptied of its contents. One numbering is as good as another; for convenience' sake, however, we follow with Schuchardt and Furtwängler that of Stamakis, who arranged the Mycenaean collection in the Central Museum at Athens. The correspondence of the numbers is as follows—

Stamakis	I.
—	II.
—	III.
—	IV.
—	V.
—	VI.

Schliemann	II.
—	V.
—	III.
—	IV.
—	I.
—	VI.

Nor is the excavation itself of uniform depth or size. Thus the side-walls of one grave are three metres in height, and five metres in another (Fig. 105); the smallest (No. II.) is barely two metres by two metres fifty-five centimetres; but the largest (No. IV.) in length measures six metres seventy-five centimetres, and five metres in breadth. Accordingly, the former contained but one body, whilst the latter had five. With one exception the bodies were found apparently undisturbed, and surrounded by objects of all kinds placed there at the time of their burial: vases, gold ornaments, and weapons. Of the fifteen skeletons that were discovered, two or three belonged to women, and other two were infants. There they lay in their stony tenements, and over them had been piled pebbles, earth, schistose fragments, and much unconsumed wood. Many of the bodies showed no sign of cremation; others at the first touch crumbled away into a blackish powder. Little heaps of a brown and powdery matter, which look like ashes, are certainly shown in the museum at Athens. But has not Schliemann more than once mistaken for human ashes vegetable matter which time and the weather had reduced to a black detritus? He was firmly convinced that the human remains he had so unexpectedly exhumed were those of the Homeric heroes who had perished in the bloody drama enacted at Mycenæ on the fall of Ilium; the bodies of the Atridæ, he concluded, had been consumed on a funereal pyre, attended with the ceremonies which Homer describes as having taken place over the corpses of Hector and Patroclus. Hence mouldy patches on the walls were thought by him to be traces of smoke left there by funerary rites.¹ Had the bodies undergone cremation, all we should find would be a few ashes within small urns or caskets; whereas everything about these corpses tends to prove that they had been laid intact in their graves: be it here a skull with circling diadem that adheres thereto,² there, a thigh-bone surrounded by the golden band intended to adorn and fasten the greave³

¹ Stamakis fell into the same error in regard to signs left by cremation about the graves (*Athenische Mittheilungen*). His observations, though entitled to respect, do not carry conviction with them. At Mycenæ he says that he found "traces of smoke in a single shaft-grave, and a number of human bones in the Heraeum, which bear no sign of cremation."

² SCHLIEMANN.

³ *Ibid.*

(Fig. 106); or elsewhere, a body partly embalmed (Fig. 107),¹ the face still keeping its golden mask, and the skin tightly drawn over the bones, whilst the eyes have preserved their eyelids, and the jaws their full number of teeth.

In this powerfully-built man, Schliemann did not fail to recognize Agamemnon, the king of kings, the once-powerful lord of Mycenæ. Even in the graves where the bodies are

FIG. 106.—Human bone wrapped in gold strip. Three-eighths of actual size.

most injured, the position and nature of the ornamental pieces found on them show that they were applied to the corpses immediately after death, before any change had supervened; the golden masks, for example, seen on many of them, are apparently faithful copies of the features underneath, whose semblance they would preserve whilst the flesh fell slowly away behind the thin metal covering. This applies in full to golden pieces (Fig. 108) fitting like a glove neck and body, and above all to apparel, which, being of perishable material, has disappeared, but its exist-

¹ SCHLIEMANN.

ence may be safely inferred from thousands of small ornaments scattered about, pierced with fine holes, doubtless meant to be sewn, in great numbers, on to the dress. A large proportion of the masks, plaques, and the like, have been flattened out of shape by the superincumbent layers of stones and silt with

FIG. 107.—Body found in Tomb II. From a painting executed immediately after its discovery.

which the graves are filled; but not the slightest mark of fire has been detected on any of them.¹ This did not escape

¹ Schliemann says that a number of ornaments which he collected in the graves were blackened by smoke. Of these not a few are small discs intended to be stitched on to the dress, and admittedly discovered in marvellous preservation, though beaten out into extreme fineness. Had they gone through fire we should find them in shapeless and coagulated masses; this, however, is so far from being the case, that their bosses are unimpaired and their edges as sharp as if made but yesterday. The so-called traces of smoke are the natural result of long contact with mother earth, charged with decomposing matter, human and otherwise. Under

Schliemann's observation; as a rule, therefore, he expresses himself as if, like us, he thought that the body had been laid out in its regal dress; at other times he apparently conceives the funerals of his heroes as having been celebrated after the manner recorded in the Epic. In trying to get out of the difficulty in which he found himself, he had recourse to the whimsical alternative of partial cremation: a small fire which would slowly consume the bodies, but not strong enough to reduce their equipment. Hence he thought that a fire had

FIG. 108.—Gold pectoral. o m. 525 broad, by o m. 365 high.

been lit immediately over the bed of pebbles supporting the corpses, which latter, acting as a sort of ventilator, allowed the air to penetrate between the single units and quickened the flame. Granting that the corpses were disposed of in this manner, the heat generated by the fire made in these pits would never have been intense enough to devour the flesh and reduce the bones to a lime condition. Then, too, how could the dead have been decked out in all their war-paint, when half consumed

the circumstances, can we wonder that the precious metals should have assumed a brownish and soiled appearance?

by fire? Had this been the case, and however imperfectly we may assume the fire to have done its work, is it likely that we should come across heads almost intact, and with all the signs of having been embalmed (Fig. 107)? The presumption is in the highest degree improbable.

Well, but what of the ashes? it may be retorted. Our answer is that Schliemann, with his pre-conceived ideas, saw more than existed in reality; but even allowing that some were found in the pits, their presence can be accounted for on bases other than the cremation theory. That sacrifices were offered to the dead, and the half-consumed flesh, along with ashes and bits of charcoal still adhering to them, thrown into the grave, is abundantly proved by the similar tombs which have been excavated in the flank of Mount Palamidi, near to Nauplia, and which date from this same Mycenaean period. They have been carefully examined by Dr. Lolling, who states that "the corpses have been buried there intact, and that cremation is out of the question."¹ However, traces of ashes and smoke have certainly been discovered on two small vases which stood near one of the skeletons. In the space interposing between the heads of the dead and the side of the grave, lay a few thinly-scattered bones of sheep and goats; bones and horns of the latter animal have also been collected in one of the grave-pits, and similar bones were sprinkled where the body had lain. It is self-evident that the bones of animals and the two vases came from sacrifices that had been made to the dead, and reverently placed in the graves by the friends of the defunct, to supply their wants after death. The habit of burying objects belonging to the defunct has never gone out of fashion in Greece. A glance at the vase section of any museum will suffice to show that more than one specimen has come out of the funereal pyre, whereon it had been exposed, more or less discoloured and blackened by smoke.

If the funereal rites were thus able to furnish their contingent of gold and ashes, the yearly sacrifices made to the memory of ancestors over their graves increased the bulk of the refuse. The existence and the persistency of this cult are made manifest by the circular altar standing one metre above the fourth grave (Figs. 102-104), and the bones of animals, of which the subsoil

¹ LOLLING, *Ausgrabungen am Palamidi*.

within the stone circle is largely composed. Nor is it difficult to grasp how these slid down and got mixed up with the rubbish piled in the grave at the time of the interment, when we remember the mode of closing it. Schliemann, as we know, recoiled from the notion that the tombs could contain more corpses than are mentioned by Pausanias; accordingly he was led to conclude that each grave had been blocked up after interment, with earth cast indifferently on the burning embers, of the pyre, the bodies richly appressed, and the sumptuous furniture; whilst certain traces of rehandling in one of the tombs¹ were proofs that the dead had been disturbed and partly plundered. But is it conceivable that the corpses would have been decked out in magnificent robes, studded with gold and silver, crowned with diadems of exquisite workmanship, surrounded with multitudinous vases of gold and terra-cotta, to be placed on the bare ground and savagely crushed under earth and stones heaped around and over them? What one might have expected to find here are chambers analogous to the "mastabas" of Lower Egypt, or the Theban "syringas"; that is to say, vaults where friendly hands had reverently surrounded the dead with the luxury which had been his on earth, in order that he might continue to lead, in the boundless and mysterious life beyond the grave, the existence to which he had been accustomed in this.

Schliemann failed to grasp the real character of these interments; but Dr. Dörpfeld's technical knowledge and more critical insight enabled him to shed a new light on this point. At the time of the Mycenaean excavations (1876), he was detained at Olympia; but he collaborated with Schliemann in exploring Tiryns (1885-1886), and finding himself in the neighbourhood of Mycenæ, he went over the ruins for the purpose of studying the questions which the discoveries of his employer had left open. He made special inquiries of workmen and visitors who had been present at the opening of the graves, and the data which he thus gathered supplied him with the means of reaching conclusions of his own.² Schliemann mentions schistose slabs, which he thought had formed the lining of the small walls, made of rubble and clay, fifty or sixty centimetres deep, and slightly

¹ SCHLIEMANN.

² SCHUCHARDT, *Schliemann's Ausgrabungen*.

escarped, which were applied against the sides of the graves to narrow the hollow.¹ Having heard that one of the slabs was actually found on a corpse, it became clear to him that it had not been intentionally put there, since nothing of the sort had been detected in the other graves. Discarding the cremation theory as untenable, we are none the less obliged to account for the many pieces of wood found at the bottom of the pits. If these were to be filled immediately after interment, why have needlessly complicated the work by making the walls lean against the rock? If walls were built here, it is because they had the covering or lid of the grave to carry, so as to make it fast (Fig. 109). The masonry at the sides of the vats was carried

FIG. 109.—Section of tomb on the acropolis, restored after Dorpfeld. *a*, walls of small quarry stones; *b*, beams; *c*, stone slabs; *d*, imported earth.

up to within a few inches of the upper rim, leaving an off-set on which rested the beam-ends supporting the slate slabs. Over them was piled much earth, carefully beaten down, so that nothing should betray the site of the tomb; but it could be reopened without difficulty for the reception of a new inmate, by simple removal of the lid and a couple or so of beams. The traces of disturbance noticed by Schliemann in the fifth grave are best accounted for by a later inhumation, than to attempts to rifle the place; furthermore, his assumption ill accords with the rich offerings which he found in it.

The results of the excavations are in perfect agreement with the notion we have gained of the shaft-graves. As stated above, ample room had been provided for the body and the furniture,

¹ SCHLIEMANN.

so that they should not come in contact with the rubbish filling up the space above the corpses. The thin layer of clay which Schliemann noticed on the bodies, and which he thought had been spread as a kind of preservative, is more naturally explained on the supposition that, however careful they may have been in fitting the covering stones and beams, a certain quantity of water charged with soil must have percolated the mass, and trickling on the corpses have formed the layer in question. For a long time no great mischief was caused by these infiltrations; but a day came for each of these graves, when the beams, having got rotten, gave way, and with them the superincumbent slabs and earth as well. The pieces of wood which Schliemann supposed to have served to cremate the bodies are no more than the remains of these decayed joists. The slate slabs found either erect against the walls of the pits or lying flat in them would naturally assume either position, according as the beams collapsed at one or both ends together. As to the "natural earth," as Schliemann calls it, largely pervaded with wood and pebbles, we know now that it slipped down when the graves were filled, and that the bones of animals beheld among them came from the sacrificial altar, whereon victims, whose blood and fat had gone to nourish the dead reposing in the depths below, had been slaughtered. Dörpfeld's assumption in regard to the mode of closing of the shaft-graves at Mycenæ was established as a fact by Schuchardt's discovery a little later. Among the objects preserved in the Central Museum at Athens¹ from these tombs, are four stout bronze casings, the side plates of which are not soldered but hammered together (Fig. 110). Each is filled with wood in pretty good preservation, which was fastened all round by a number of strong copper nails. These casings sorely puzzled Schliemann. Boxes they could not be, for they are without lids; besides, the pieces of wood and the nails proved that the hollow space had once been filled. Schliemann proposed to recognize in these timber blocks, shod with copper, "head-pillows for the dead, and perhaps also for the living," akin to those wood, or alabaster, or ivory pillows found in Egyptian tombs;² he is careful to add, however, that no such casing was

¹ SCHUCHARDT, *Schliemann's Ausgrabungen*.

▼ ² *History of Art*.

found under a head in the Mycenaean graves, although diadems still bound the brow of many a personage.¹ It would be hard to imagine a more uncomfortable pillow, or so utterly at variance with the childish beliefs of the simple folks of that early age, who were particularly mindful to provide for the necessities of the dead, in chambers which they furnished as comfortably as they could for them. The real destination of these casings was to protect the beam-ends against damp, on which rested the covering slabs. The wood still fastened by many nails is what remains of the beams in question, and their square is obtained from the copper lining. Each is twenty-five centimetres long, eleven centimetres

FIG. 110. —Bronze casing.

broad, and five centimetres high. The fact that the third tomb is the only one which had the bronze plating, and its being also the most elaborately decorated, leads one to infer that it contained the wealthiest and most powerful personage. Special care, too, had been taken with its closing-slab, which was at once more elegant and solid.

Having now gone into the main characteristics which distinguish these sepulchres, we will put off dealing with the problem they raise until we shall have surveyed the graves of the lower city, whose plan and details are quite different. Then only shall we hazard an opinion whether the tombs which Schliemann dis-

¹ SCHLIEMANN.

covered at the entrance of the acropolis are to be identified, as he persistently maintained, with those mentioned by Pausanias. For reasons often adduced before, neither shall we enumerate the contents of each grave, in that they will find ample recognition in a separate chapter by and by. We will confine our words to one remark: the impression left by close inspection of the contents of these graves—now carefully labelled and classified in the cases of the Central Museum at Athens, where everybody can study them—is not in accord with Schliemann's conception, based, as he deemed it to be, on his researches and

FIG. 111.—Model of a gold temple from Tomb IV. Actual size.

discoveries.¹ He was inclined to think that each grave had served but once, and that the interments were simultaneous or nearly so. But as we have shown above, the facility with which the graves could be re-opened, the position, here of the bodies, there of the different aspect of similar offerings in the same pit, suggest successive inhumations. The workmanship of the single masks in the fourth grave offers enough variety to preclude the idea that they were made by one hand or at the same time;² these shades of difference are even more marked from one grave

¹ The relation the graves bear the one to the other is carefully and critically set forth by Schuchardt (*Schliemann's Ausgrabungen*). His conclusions are accepted by us.

² SCHUCHARDT, *Schliemann's Ausgrabungen*.

to another, or rather between the two groups into which they have been chronologically divided, according to their contents and the relation they bear to one another.

Close affinities are noticeable, on the one hand, between the first, second, and sixth graves, and on the other, between the second, fourth, and fifth. From the third and fourth pits have come gold ornaments, representing temple façades (Fig. 111); these, though found in distinct graves, were seemingly stamped in the same mould. The third and fifth graves have alone furnished circular gold plates intended to be glued on to the garments, from which they detached themselves when these

FIG. 112.—Gold plate from Tomb III. Actual size.

crumbled into dust (Fig. 112). But what most of all characterizes and differentiates the two groups is the furniture of their respective graves: this in the first (I., II., VI.) mainly consists of clay vases, whilst in the second (III., IV., V.) metal predominates. If gold, silver, and bronze have been met in the graves of the first group, both ornaments and utensils are smaller in size and the designs simpler than in the second series. The single objects of Tombs I. and III. show that women alone were buried in them, and men in Tombs II., IV., V., and VI. Examination of the separate finds from the graves leads to the following result. Ear-rings, bracelets, and amber beads, which are abundantly found in the third grave, are absent from the first; where, too, diadems, pendants, and crosses have much simpler patterns. Again, the

men's graves (II. and IV.) have no masks, and no gold glittered on their breast-plates or shoulder-belts; the second sepulchre, unlike its fellows, contained but few weapons, whilst elsewhere a rich harvest has come to hand. It is self-evident that this cemetery does not belong to a single period, but gradually came into being, and expanded to the size we have it to-day; and that a certain number of years parts the earliest graves from the later ones; whether this should be set down at fifty or a hundred years it is impossible to say—at any rate it was long enough to have brought a notable modification in the taste of the people, and a much larger use of the precious metals. The answer to the query as to which of the twin groups preceded the other will come best at the end, after the study on Mycenaean culture and ceramics; these will enable us, if not to decide a most obscure question, at least to put forward a conjecture which we hope will not be deemed void of probability. This, however, is a detail of minor importance. The main point was to establish (1) that this burial-ground was used for a considerable number of years; (2) that although the general resemblance from one grave to another is striking enough, close inspection yet reveals slight differences between them; (3) that the tombs are all on the same plan and have the same outward aspect; (4) that if the single objects differ in some measure from one grave to another, they belong, nevertheless, to the same system, in that the distinctive characteristics of the style are common to both, and so peculiar that nothing resembling it has appeared anywhere else except in Greece; and even there never before or after this particular epoch. It follows, therefore, that tombs and offerings are not only the handiwork of one people, but of one distinct period in the existence of that people. Below these stelæ and the sacrificial altar, under the shadow of formidable ramparts, stretched the royal necropolis, in which reposed the men and women of an influential family, a dynasty wealthy enough to have diverted and buried along with it part of its treasures. Bones and human skulls found in the rubbish above the tombs¹ are supposed to be either those of servitors or dependants who were allowed a place near the tribal chiefs, or more likely still, slaves or prisoners of war slain at their masters' or conquerors' funerals, as the case might be, in order that

¹ MILCHÖFER.

these should not appear without a retinue in the ghostly world. Let us remember that bloody sacrifices were still known to Homer, who describes the Trojan captives immolated over the pyre of Patroclus. These graves are centuries older than the Epic, and date back from a time when the beliefs which commanded these cruel and revolting rites were potent enough to sway prince and peasant alike.

The cemetery could not well extend beyond its boundaries; the space it occupies is fenced in by the hill on the one side and the circuit-wall on the other; over it the rock falls away precipitously, between the Lions Gate and the group of houses lying south of the acropolis. The final closing of the cemetery likely enough coincides with a dynastic change; but the chiefs who were interred here had played too important a part among their people to pass easily out of their memory or regard; even though the soil and ruin, largely made up of chips from broken stelæ, bones, and refuse, "presenting the aspect of a charnel-house, went on increasing in depth over their graves, not closed for all time, and above the fast-disappearing altar a stelæ."¹ A time came when religious scruples counselled improvement of that corner of the acropolis. The sacredness of the altar saved it from destruction; but it had to be buried out of sight with imported earth, in order to obtain a level surface some five or six metres above the graves, which was enclosed with two rings of slabs, old and new. The entrance to the enclosure was found on the north side; but the stelæ and surrounding slabs are of limestone. As far as can be gleaned from Schliemann's confused account, sculptured stelæ representing hunting or war-scenes belonged to men's graves, whilst those of the women were quite plain. Apparently about the same time, the circular wall was moved backwards, so as to provide a strip of land between it and a stone circle for a path which led from the Lions Gate to the acropolis. In this way the circle became a kind of sanctuary *temenos*, a sacred memorial to glorious ancestors, the founders and tutelary heroes of the city. That the *temenos* was instituted during the Mycenaean period is shown from the elements composing it; had it been set up when plastic art had rid i

¹ SCHLIEMANN.

² The observation comes from SCHUCHARDT, *Schliemann's Ausgrabungen*.



of its swaddling-clothes, the sculptures on the stelæ would betray rehandlings of a later and more advanced age, side by side with forms belonging to the early stage of the industry we are considering, and which would have been left untouched. Here, on the contrary, figures, whether of men or animals, and ornament pure and simple, are all welded together into an indivisible whole; all belong to one culture, of which we shall have more to say hereafter, when we come to examine the objects found in the graves.

The exhumation of these graves and their incomparable wealth of offerings constitute Schliemann's principal finds in the



FIG. 113.—Gold rings. Twice over actual size.

Mycenian acropolis. He also cleared out, south of the temenos, a whole mass of buildings with Cyclopæan masonry; and in the course of the excavations many a rare vase and personal ornament were brought out. The most important objects in this find are four beautiful golden goblets, and rings of the same metal (Fig. 113). Two of these are signet-rings decorated with intaglios, and deservedly reckoned among the most exquisite instances of Mycæan glyptic art. They are from a circular excavation which Schliemann at that time identified with the site of a grave, because it was enclosed on two sides by built walls, with a filling of rubbish at the back; and that at two of the corners these walls

had a salience beyond the area of the grave (Fig. 90, D);¹ but no bones were found in it. It is but two feet long and eight inches broad; it must therefore have been the cellar of the house where the owner secreted his valuables in a casket which, being doubtless of wood, has crumbled into dust.

One is rather surprised to find that Schliemann's campaign, bruited abroad as it was to all the points of the compass, should not have led to fresh researches on the acropolis, where excavations carried on in a small corner of it had resulted, in a few months' time, in discoveries at once unexpected and far-reaching in their importance. The sixth shaft-grave was discovered by Stamakis in the following year (1877). From that day until 1886 not another blow of the spade was given here. Schliemann seemed to have lost all interest in Mycenæ; and he never saw it again, except when he was excavating close by at Tiryns. From first to last, his work of predilection, that upon which he had set his whole heart, and which death alone caused him to relinquish, was his beloved Hissarlik. The Archæological Society seemed at first willing to continue Schliemann's labours on this spot; one would have thought that a first success, so promptly obtained, would have encouraged them to renew their efforts on a spot where as great if not greater discoveries than those already made might reward the explorer. Matters, however, took another turn; the monies that might have been spent in this direction were diverted into channels which some would deem of less importance. The real cause for these delays and abstentions, however, must be sought in the disturbed and bewildered state of mind into which archæologists were thrown by the discoveries at Mycenæ; the strangeness of the objects found in the graves gave rise to the most absurd hypotheses, even in well-informed quarters. The discoveries made soon after at Spata, Menidi, and Tiryns, comparison of the Mycænic finds with the monuments of Ialsos, which, having been brought to light some time before, had had time to be studied and classified, at last brought something like order in this branch of study. Calm was gradually restored to minds which had been thrown

¹ This building, which figures as the "sixth tomb" in SCHLIEMANN'S *Mycenæ*, Chap. ii., should not be confounded with the sixth grave of the slab-circle, which was exhumed by Stamakis a year after Schliemann's researches on the Mycænic acropolis.

off their balance by the Mycenian monuments; and scholars submitted to welcome an art and industry which had been hitherto unknown to them.

In 1886, by the indefatigable care of the Archæological Society, their representative, M. Tsoundas, who had succeeded Stamakis, lately deceased, as ephor of antiquities, not only reopened the trench at Mycenæ, but explored the upper and lower city as well, and carried on his investigations at other points of Greece, Laconia for instance, with brilliant success. His well-considered observations have been published from time to time, and testify to rare insight and a wide range of reading. He is worthy to take his place alongside of Schliemann and Dörpfeld. Like them he has succeeded in widening the field of our knowledge as to the prehistoric and forgotten culture of Greece, and to him redounds the honour of having made it more complete.¹

Thus he simultaneously cleared the walls crowning the summit of the acropolis, which Schliemann's researches had pointed out to future explorers, and those skirting the circuit-wall south-east of the acropolis, near to the buildings unearthed in 1876, which Schliemann had christened by the high-sounding name of "Palace of the Pelopids." It is needless to add that nothing about these structures justifies the ambitious title. The rooms are small and insignificant, with no outlet into a space which might point to extensive courtyards. The walls, though massive, can only have belonged to the outhouses of an adjacent palace, or rather to private houses. Those uncovered by M. Tsoundas here have nothing to distinguish them from the very similar buildings already known, at least in their oldest portions. Behind the massive block of masonry, forming a kind of tower on the south front of the enclosure wall (Fig. 90, A), erections squeezed in between the rampart and the side of the hill have been exhumed. That they belong to different epochs is proved from the fact that the walls cover and bisect one another obliquely instead of at right angles (Fig. 114). Out of this labyrinthine mass M. Tsoundas singled out the most important, which he has described and published.

The space, A, paved with small stones overlaid with lime,

¹ TSOUNDAS, *ἀνασκαφαὶ Μυκηνῶν τοῦ 1886*, in *Πρακτικὰ τῆς ἐν Ἀθηναῖς ἀρχαιολογικῆς ἐταιρίας τοῦ ἔτους 1886* (Pls. IV. and V.).

must have been a courtyard. Above the letter A (see plan) appears an excavation hewn in a brace of huge tufa boulders, at the bottom of which is an opening sixteen centimetres broad. At first sight the cutting might be taken for a sink, but as it was filled with charcoal, ashes, and bones, the idea, if it ever crossed



▨ Walls of the Mycenaean epoch.

▤ Walls of a later epoch.

FIG. 114.—Plan of structure opposite to the south wall.

the mind of the explorer, was dismissed in favour of a "pit-offering" analogous to the Tirynthian and Mycenaean specimens (Figs. 81, 82, 103). The base close by must have supported a wooden pillar (*a*), one perhaps from a portico extending between the court (*b*) and the fore-chamber or covered vestibule. This opened into the megaron, or men's apartment, with central square

hearth, built of crude brick mixed with straw, rising ten centimetres above the ground.

The walls are still standing to a height of forty-five centimetres; they consist of small quarry-stones and of horizontal beams inserted in the masonry, and have no better binding than clay mortar. The inner face of the walls was covered first with a coating of mud, over which was spread another of lime. One of the twin jars found in a corner of the room is one metre thirty-two centimetres high. Like the building on the top of the hill, these houses were destroyed by fire. A flight of thirteen steps led from the great court B to a narrow passage two metres eighty centimetres below, opening on three chambers. These, to judge from the thickness of the walls, must have carried an upper storey, doubtless the women's apartment, and the exact counterpart of the megaron. The lower rooms in question were destitute of air and light, and unfit for human habitation. They were the cellars of the house. The floor consists of beaten earth; there is no trace of cement on the walls, and several pithoi were discovered in an erect position, amidst accumulations of rubbish. The outline of the building can no longer be made out towards the courtyard; but excavations have cleared it out on the west and south fronts, where it was skirted by a narrow footpath (D) and a stairway which ascended to the citadel and ran inside the boundary-wall P.

The forms seen on the fragments of wall-painting which were found in the megaron belong to the geometrical style; but the three figures with asses' heads, carrying heavy poles on their shoulders, were discovered on a wall to the south, near the stairs Z. They are much the most important frescoes from Mycenæ. Within the walls of another private house, at point G, almost on the solid rock, bone and glass buttons, amber beads, gold plates, carved ivory, etc., were collected, of which more anon. A number of small items have been furnished by the deep and broad layer of ruin and soil extending between the boundary-wall and the escarp of the hill on the south side. On the other hand, the clearing of a large edifice occupying the summit of the acropolis has hardly yielded any result. During the conflagration and after it, many a piece of wall must have rolled down the slopes of the hill with its contents, and when new erections were built on its narrow summit the débris handed to and fro by the

workmen were doubtless eased of their most precious objects (Fig. 115).

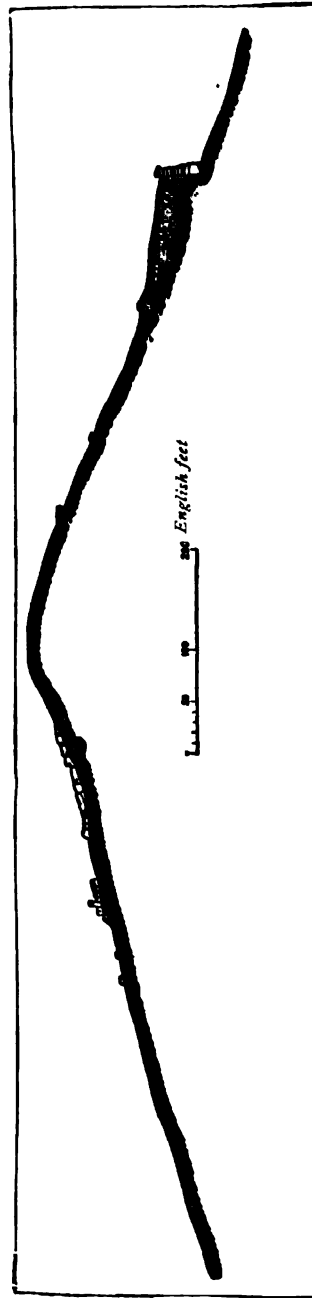


FIG. 115.—Profile of the Mycenaean acropolis rock, from west to east.

Before the excavations, the foundation walls visible on the summit of the citadel allowed one to guess a great rectangular

structure built of great blocks, and in this wise they are indicated in Steffen's map. It soon became apparent, however, that the walls which had been cleared belonged to a Doric temple with general direction from north to south (Fig. 116), enclosing a rectangular area forty-three metres long by twenty metres. A stone of the cornice and two fragments of the metope—the

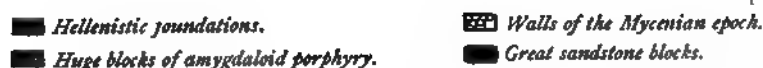


FIG. 116.—The Mycenaean palace.

latter bearing upon them evanescent figures—permit us to fix the date of the temple between the sixth and seventh century B.C.; that is to say, many hundred years after the building of the graves and other prehistoric and quasi-legendary monuments brought to the notice of the world by Schliemann in their brave war-like attitude and wealth acquired by conquest. As at Tiryns,

the primitive layer was covered by the subsequent stratum left by the classic age. On the north side the foundations of the temple rest on the rock, but on the south front they stand on silted-up earth three metres deep; it was within these accumulations that walls of two different ancient periods came to light. The first to appear were built of small stones bonded with clay, enclosing narrow cells. Then, a little below, there were others made of much larger blocks, cemented and dressed fair, which crossed each other at right angles, and enclosed an area which turned out to be a vast courtyard, paved with lime concrete. These walls had a coating of lime. Over the courtyard, as well as over the site of the ancient edifice, hastily-built and closely-packed wretched hovels have left but faint traces of their ephemeral existence. Accordingly, by following the jets of the massive and therefore older walls, we shall easily make out their circuit, and obtain a ground-plan coinciding in every respect with that of the similar buildings, whether at Troy or Tiryns, to which the name of palace has been applied. The main division is a large hall with a double vestibule set back to back; a great court, and around it several minor apartments, but how distributed is no longer clear. Two roads led up to it, and the whole block was surrounded by a wall of great strength. From the Lions Gate, the main path ascended towards the acropolis, turning the temenos on the north, up the southern slope of the hill, reaching the palace close under the court.¹ The royal mansion planted on the rocky height—here very abrupt—which served as pedestal to it, towered far above the remainder of the acropolis, than its fellows of Tiryns and Troy. Hence, to bring the path to the foot of the palace, many rock-cuttings would have been required. Another plan was adopted. As stated, the path stops by an outer courtyard (Fig. 116, *c*), preceded by a vestibule whose entrance bears no trace of either door or holes in the ground-sill (*a*); but right of this ante-room was a small chamber (*b*), which may perhaps have been a porter's lodge. From the courtyard started a stairway, two metres forty centimetres broad, of which twenty steps are in good preservation, and two more

¹ A description of a road built with alternating courses of large and small stones, which from the Lions Gate ascended towards the acropolis, will be found in *Δελτίον*, 1891.

towards the top are still visible. These steps are from ten to twelve centimetres in height, and average forty centimetres in depth. The breadth was not obtained by a single stone, but three or four made up the tale. They were overlaid with a coating of plaster; this, having often been renewed, is one and a half centimetres thick.

The whole south-east corner of the upper level has been destroyed by a landslip; as a consequence of it, we know not where or how the staircase ended. Did it turn the south corner and curve round with a single flight to the south-west angle? or bend sharply near to the point where it now breaks off, and debouch on the south front of the esplanade? It is impossible to say. From the fact that a huge ground-sill was lying at the entrance leading from the courtyard, one is tempted to set up before the upper landing a propylæum analogous to the Trojan and Tirynthian examples. The stone in question was cleared, but it no longer occupied its original position; this, from reasons of size, cannot have been far distant. The breadth of the courtyard, eleven metres fifty centimetres, can alone be ascertained; its length is an unknown quantity, the whole of the front, as referred to above, having disappeared, along with the wall which supported the platform on this side.

Per contra, the north wall of the courtyard, consisting of six courses of large blocks set out in horizontal beds, is still standing to a height of two metres forty centimetres. Here and there, hollows in the masonry tell us that they were once occupied by transverse beams, just as in the mud walls of Troy and Tiryns. On the right of the court rose a pavilion, in which we guess the main apartment, the reception-room, both from its size and the few scraps left of its decoration. Speaking generally, its inner details coincide with those of the similar building at Tiryns. It had an open vestibule or verandah, three metres nineteen centimetres deep. Two columns *in antis*, equally spaced, supported the roof. Traces of wooden pillars and antæ still adhere to the stone bases which formerly supported them. At the back of this porch was a second and deeper vestibule. At the entrance, one metre ninety-four centimetres broad, is a stone threshold with large holes on each side, into which the door-posts were sunk. The ground-sills are all of amygdaloid porphyry, a substance much harder than

the limestone used in building the walls. At the right-hand side of the stone threshold there was a circular hollow, upon which, as at Tiryns, turned the foot of the pivot,¹ shod and faced with bronze. On the edge of this threshold a groove was sunk, fifteen centimetres broad, in which the door moved. A very similar doorway connected the second vestibule with the great hall or megaron. At its entrance we again find a ground-sill with holes for the door-posts, but without the circular hollow for the hinge, or the groove in which the door moved, for, as at Tiryns, there never was a door here; a flowing curtain sufficed to shut off the room. The megaron, to which easy access could be had, is eleven metres fifty centimetres by twelve metres ninety centimetres. The ceiling was supported by four wooden pillars, which rested on stone bases, now sunk below the concrete floor, owing to its having gained in depth through frequent restorations. This is also the case with the great circular hearth occupying the centre of the megaron, between the columns, of which about a third remains. It is quite enough to give us its diameter, and enable us to re-establish its primordial aspect. It was raised fourteen centimetres above the floor by two low steps, and exhibits five successive stucco coatings, which had all been painted; glowing embers and hot cinders made frequent repairs necessary. In another chapter will be found a reproduction, after Dörpfeld's copy of it, of the design which appears on the third and best-preserved layer. The floor around the hearth, like that of the vestibules, consists of a well-made concrete, enlivened with a chequered pattern corresponding almost exactly to that of the Tirynthian megaron; but along the walls of the room slabs of a kind of alabaster were laid down, and constituted a border or walk around it. As already stated, the farther end of the hall has gone, because it doubtless rested on accumulations which, having given way along with the wall which they supported, were precipitated below into the ravine of the Chavos.

The portion of the building extending to the north of the court and the megaron has left but very feeble traces of itself. Four rooms next to the megaron have been noticed at different levels (*l, o, m, n*), some with concrete floors, and others with nothing but the bare earth. They were probably sleeping- or

¹ A very similar contrivance has been found in Assyria (*History of Art*).

store-rooms. The two wings of the edifice, east and west, were connected by a passage running between them (*i*), which about the middle of its course disappears under the foundations of the temple; but it must have led to the exterior gate opening in the circuit-wall, opposite and close to the terminus of the path that came from the Lions Gate. The portal in question and the wall in which it was pierced have disappeared; but to the left of the passage, still preserved, a threshold with hinge-hole for a single door marks the site of a second or inner doorway. Through this gate communications between the two sides of the building could be kept up or broken off at will. The left section, though in a much poorer state than the one just described, can be made out with certainty; it differed from the right division in this, that its apartments were larger and fewer. The main room (*e*), six metres twenty centimetres by five metres forty-five centimetres, facing the megaron, is not in direct communication with the court, but is approached through a fore-chamber (*d*), whence a second door, opening into a room next to it, led to other apartments, which must have leant against the boundary-wall. Neither entrance had a doorway, but the bay opening on the court, with its back to the fore-room, was closed by a single door. Against the north wall of room *e* is a hearth built with mud, not round as in the megaron, but square. It is five centimetres above the floor, eighty centimetres wide, and one metre five centimetres deep. Under the concrete floor was a conduit built with glazed tiles; it dipped to the west and served to drain off used water. To the north of this hall a passage (*f*) connected the court with the back division of the palace *o*; the site is now empty, yet buildings must formerly have stood here. At the entrance of the passage, on the right (*f*), the walls of which have been cleared, are three stone steps, forming the lower portion of a staircase which led to the upper storey; the third is larger, and constituted a landing, whence the stairs turned to the left and were continued in wood (*r*). This storey carried the hall (*e*), and the two passages (*f* and *i*) just described. On the north, the last-named corridor led to further apartments, of which the ground-sills and jets of walls are still visible. The plan and details, however, have been obscured by the weather; all we can make out is a great chamber (*k*), the floor of which

shows no trace of concrete ; but the quaint, painted fragments to which reference was made a little while ago came from its walls.

The position of the outhouses and courtyards of the royal mansion has already been indicated as having extended, in all likelihood, in this direction.

We said that if the discoverer of these ruins connected them with the earliest civilization which has left its impress on Grecian soil, it is not only because they are found resting directly on the rock, but that the foundations of a later though archaic edifice which cover the older walls are parted from them by a whole layer of ruin and silt. This is a first and strong presumption of antiquity. Our observations relating to the ground-plan hold good with the elevation and mode of building generally—their resemblance to the edifices of Troy and Tiryns is truly remarkable, and extends from roof to basement ; material, processes, decorative scheme, and separate finds being amazingly alike. Here were not found, as in the graves, weapons, personal ornaments, whole vases, either of metal or clay ; yet a site which was so long inhabited must have left an abundance of potsherds, and so well-advised an archæologist as M. Tsoundas could not fail to take them into consideration. "In my journal of excavations," he writes, "even before any connection could be made out between the different walls, the upper part of which we first laid bare, I noted down that between the walls, which soon after proved to be of later date, only chips of vases of the geometrical style (*dipylon*), with quadrupeds and birds, were found ; whilst wherever these walls were non-existent, or below their level, or on the concrete or the solid rock, all the fragments decidedly belonged to the Mycenaean style.¹

The many trenches sunk in 1876 on the acropolis failed to bring to light the whole wealth hidden in the lower stratum. On the north-east of the Lions Gate, between the circular wall and the ruins marked on Steffen's map "Remains of Later Buildings," M. Tsoundas' researches in 1890 yielded the most interesting results.² He found here buildings of the Mycenaean period, but of more primitive appearance than either the palace or the domestic abodes grouped on the southern side. The material is the same in both ; but here are no traces of cross-beams in the

¹ Πρακτικά.

² Ἐφημερίς ἀρχαιολογική.

masonry; the stones are still unsquared, laid in mud, and of no great size. No layer of lime or even clay is seen on the walls, and the floors have no concrete. The houses were paved with round stones, over which was spread a bed of earth beaten down. The walls are unpierced by any doorways, and preserve a mean height of two metres. Hence, on the first blush, one is tempted to see here simple foundations, covered in by-gone days by later substructures; but as the foot of these walls is practically flush with the paths still perceptible on the rock which once skirted them, the notion has to be abandoned; furthermore, the *pisé*

FIG. 117.—Modern house.

flooring of these apartments proves that they formed part of the building. The only alternative, then, is that they were the store-rooms of the house; above them came the first storey, where the family lived. It was approached, as most houses in Argolis are now approached, by an exterior staircase parallel to the façade of the building (Fig. 117). The chambers on the ground-floor in all probability were only lighted by narrow slits pierced in the walls; a trap-door may have led to them from the upper storey.¹ Curiously enough, burials were discovered in

¹ Schliemann, describing the ruins of the house which he identified with the palace of Atridæ, also noticed that the chambers he was uncovering showed no trace of doors.

these chambers, four in one and two in another. They were small and insignificant, and only contained children's bones and valueless objects, bronze pins and terra-cotta vases. Upright slabs, and others horizontally placed to form the lid, went to the making of these graves. This was the first time that inhumations were found within the house. That they are contemporaneous with the buildings on the floor of which they were uncovered, is proved from the accumulations, *cir.* two metres deep, that covered them, interspersed with broken pottery exactly similar to the oldest specimens which have come from the shaft-graves. The houses in question, though of mean appearance as compared with those whose walls and floors were painted, have yielded two small treasures, consisting of implements and bronze weapons. They lay still undisturbed in their hiding-places, cavities that had been made in the wall, so as to secure them against pilfering hands. A bronze statuette, one of the rarest of all art products in that distant period, was found here. Judging from the general character of these several finds, notably certain fibulæ, M. Tsoundas is inclined to place these objects, which he thinks home-made, and the houses in which they were discovered, towards the end of the Mycenaean period.

Our task, whether at Troy or Tiryns, terminated with the description of the castle and the defensive works. As to the populations which doubtless inhabited the lower city, the traces they have left behind them are so evanescent, that their existence was inferred rather than established. Here the case is entirely different. Apart from the Mycenaean acropolis, we find a second walled city, some of whose monuments are among the most stately which the civilization we are considering has produced. Its area, however, was soon found too narrow to accommodate the increasing population which flocked here to place themselves under the protecting shadow of the stout fortress. This is proved by the sustaining walls, covered with the ruins of the houses they once supported, and which extend on the slopes of the heights overhanging Mycenæ. In this open quarter of the town, besides the Perseia, the only other springs which could supply water to the Mycenians were the Epano and Katopigadi sources, as they are now called. Here too, apparently, have been discovered the foundations of a temple and the domed-buildings which Pausanias calls Treasuries, but in which we recognize

tombs. Other graves, rock-cut instead of being built, have been noticed on several points of the vast area comprised between the Kokoretza and the Chavos ravines in one direction, and the broad valley of the Dervenaki, ancient Cephissus, which forms the base of the triangle on the other (Fig. 88). The interesting results which have been obtained here are an earnest that shafts sunk almost in any artificial swelling of the ground would amply reward the explorer. Like the greater portion of the acropolis circuit, the rampart of the lower city is built in Cyclopæan style; the blocks, however, being smaller, were easily removed and re-used in later buildings; whilst the thinness of the wall itself could ill withstand the ravages of time, and in consequence of it great pieces are completely destroyed; hence its length of line is more or less conjectural. The wall certainly passed along the western front of the acropolis; its points of junction were north and south of the Lions Gate respectively, but the precise spot is mere guesswork. This much is plain: the circuit on the eastern side ran in a southern direction along the ridge overhanging the Chavos, thence sweeping with a bold curve towards the south-west it turned a huge block of rocks, the Makri-lithari, behind which the rampart was pierced by a gateway; from this point it circled back towards the west, running along the slope descending into the Kokoretza ravine. The plateau it enclosed was not quite 900 metres in length, and its greatest breadth barely reached 250 metres. It would seem to have been divided by a transverse wall into two distinct and equal portions; in case of an attack during which the south gate had fallen in the enemy's hands, this barrier would enable the garrison to renew the defence under favourable conditions.

Within the walled city is found a monument which with the Lions Gate long shared the honour of being the sole representative in this part of the world of what archæologists then called the "heroic age of Greece." We allude to the building which, since the end of the last century, explorers and local guides alike used to describe as the Tomb of Agamemnon or Treasury of Atreus indifferently. These names are of no great antiquity, and oral tradition knows them not. So far as I am aware, Greece furnishes no example of appellations of this nature which would have reached us from the dim past. This is true of Athens, where the population has never been anything but

Greek in blood, as well as of those districts over which have swept the Slav, the Albanian, and the Turkoman in turn, destroying villages and towns, but which have emerged out of their ruins after a shorter or longer break in their social life and culture. These designations do not go beyond the beginning of the Renaissance, when a love for classic lore was rekindled, and inquisitive minds revisited Greece, using Pausanias as their guide; the names were taken up by the sharp-witted natives and ciceroni with an eye to business, and in this way they assumed a seemingly traditional air, enough to pass muster. Such denominations were all the more deceptive that they are often puerile; the name of Lantern of Demosthenes' applied to the Choragic monument of Lysicrates at Athens, for example. Verily, small was the equipment of scholars who could endorse such inanities.

The so-called "Treasury of Atreus," with slight differences, reproduces a type which we have met before on the slope of Sipylus, in Phrygia, as well as in the Carian peninsula of Halicarnassus;¹ but in Hellas proper will be found the best exemplar of this class of monuments. A full description of it will come by and by. For the present it will be enough to recall the main features of this and other very similar edifices, both at Mycenæ, in the Peloponnesus, and Central Greece. The masonry of the treasury in question, unlike the tumulus of Asia Minor, which is invariably built of rubble and mud standing in the open, consists of large blocks, and is embedded on one side in the flank of the hill. The building is made up of a long entrance passage (*dromos*) and a circular chamber (*tholos*), over which rises a dome, parabolic in shape. To us brought up in the traditions of Roman architecture, the idea of a cupola is intimately bound up with that of a vault, and unless previously prepared, one who enters the spacious nave looks out for voussoirs, and notices their absence with real feelings of surprise and disappointment. So great is his astonishment, that he deems himself the object of hallucination, and unconsciously turns to the spot where he hopes to find the springers and the key-stone, but all in vain.² The roof which *in limine* gives that illusive im-

¹ *History of Art.*

² Nowhere, perhaps, does Pausanias show more clearly than in relation to these walls, that, though a good clerk, he had no eye for brick and stonework. How else

pression, is constituted by a series of horizontal rings converging towards the top, and closed by a stone placed lintel-wise.

The methods employed for obtaining the required curves in plan and elevation will be explained hereafter. For the present we will confine our observations to such general features as are most constant in the buildings that will oftener be referred to by us during our journey across Mycenaean land. Though in a semi-buried state, some of these cupola-shaped tombs, as they are generally called, had long been known ere the late excavations cleared them out, and led to discoveries of the most interesting nature, at Amyclæ for example; others have been reported from Attica and Thessaly; and some day, from under the ruinous domes of the graves as yet unexplored at Mycenæ, precious relics may turn up unexpectedly.¹

Before proceeding to enumerate and describe these buildings, it behoves us to justify the name we apply to them. No allusion whatever is made to these monuments either by Homer, or the Lyrics, or the Tragedians. The first literary reference to them is found in Pausanias, who noticed them at Orchomenos and Mycenæ, and ascribed them to princes of the heroic age, by whom they had been used as store-houses;² and he calls them *θησαυροί*, "treasuries." A century later, Athenæus, in a passage which has scarcely received the attention it deserves, says: "Great tumuli are scattered all over Peloponnesus, and especially Laconia; they are called Phrygian tombs, and are supposed to contain the companions of Pelops."³ Should not these mounds, to which the

are we to understand his having failed to distinguish the constructive peculiarity under notice—that, too, when his path in the Eastern and Western Province was literally strewn with Roman vaulted buildings? Yet he thought that the Treasury of Minyas at Orchomenos, as he styles it, was a vaulted instead of a domed building, since he writes: "The Treasury of Minyas is a circular edifice, built of stone, with a pointed top; the uppermost slab, it is said, forms the key of the whole erection": *τὸν δὲ ἀνωτάτω τῶν λίθων φασὶν ἁρμονίαν παντὶ εἶναι τῷ οἰκοδομήματι* (PAUSANIAS, IX. xxxviii. 2). That Pausanias understood the word *ἁρμονία* in our sense, is proved, as Berger justly remarks, by his applying it elsewhere, in his description of the walls at Tiryns.

¹ For all that relates to this class of monuments, we have made liberal use of BELGER's dissertation, *Beiträge zur Kenntniss der griechischen Kuppelgräber*. In it are displayed much learning and a precise and well-pondered criticism.

² PAUSANIAS.

³ ATHENÆUS: "Ἴδοις δ' αὖ καὶ τῆς Πελοποννήσου πανταχοῦ, μάλιστα δ' ἐν Λακεδαιμόνι, χώματα μεγάλα, ἃ καλοῦσι τάφους τῶν μετὰ Πέλοπος Φρυγῶν.

inhabitants ascribed a funerary purpose, be identified with the domed-buildings of which the finest examples are to be seen at Mycenæ and Orchomenos? If Pausanias heard them so called during his visit to the peninsula, he paid no heed to it, and preferred the theory—because savouring of archæological knowledge—which accounted for these buildings on the assumption of the fabulous riches of kings of by-gone days, and of their natural desire to put them in a place of security. Such a notion may have been suggested by circumstances of a nature to strike the popular fancy. It is just possible that, like Schliemann at Mycenæ and M. Tsoundas at Vaphio, the men who rifled these tombs in antiquity found much gold and silver in them, and that the fact may gradually have oozed out. As at that time the habit of stowing away large quantities of the precious metals in well-guarded chambers was no longer current in Greece, it was natural to conclude that they had been purposely built to keep treasures.

That there should have been much uncertainty on this head will be easily grasped, if we remember the radical changes which the Dorian invasion effected all over Greece. To confine ourselves to the subject under notice: cremation, by substituting itself everywhere for inhumation, had given rise to architectural innovations to suit the needs of the new mode of burial; whilst the destruction of Mycenæ and Orchomenos, the chief centres of this now obsolete type of interment, helped not a little to efface the memory of the past, and make a return to ancient habits impossible. The site was left desolate for a period of longer or shorter duration, and in consequence of it a forcible break intervened in the local traditions. Nevertheless, after the Macedonian and especially the Roman conquest, when Greece became a vast store-house of learning, in which the scholarly *periegetes* (traveller) had ample opportunity to satisfy his intellectual cravings, it is impossible that when brought face to face with these buildings he should not have asked himself the question as to the end for which they had been made. Every one who has visited the site of ancient cities, has seen at one time or another great cavities, with circular base and conical top, yawning at his feet. They are entirely buried in the ground, without doors or windows, and are entered by means of a ladder or rope, through an orifice left on the apex. Like the modern

“silos” of Southern Europe, all sorts of provisions were stowed away in them. The word *θησαυρός* must primarily have been applied to such cellars as these.

The grains deposited in them were less exposed than they would have been in apparent buildings, to fire, plunder, or the action of the weather. By analogy, the appellation was extended to buildings the object of which was to preserve substances of any kind, as for example the chapels of Delphi and Olympia, in which the costly offerings made to the shrine by the Greek cities were kept. Were the public stores at Cyzicus subterraneous buildings? We know not, except that they are said by Strabo to have been, one the granary, the second the arsenal, and the third a store for all kinds of implements and machinery of the commonwealth.¹ There are literary evidences that the word *θησαυρός* was usually understood to indicate underground structures, hermetically closed except at rare intervals, and lighted by a single aperture at the top.² Can we wonder that antiquaries on the threshold of their science should have identified them with *θησαυροί*? The temptation was all the more irresistible that Mycenæ and Orchomenos were reputed to have been the most opulent cities of prehistoric Hellas, and, above all, to have had an abundance of the precious metals.³ The inference to be deduced from them was that the Argian and Minyan kings had built strong and lasting structures, to place their hoards above temptation. The domed-buildings of Orchomenos and Mycenæ seemed to fulfil these conditions. They were of considerable size, built of stones dressed fair, and not wanting in a certain degree of stateliness which brought them in harmony with the greatness and splendour of heroic kings. Hence the denominations found in Pausanias, who assuredly had not invented them, were at first accepted by authoritative European scholars without a

¹ STRABO.

² HERODOTUS mentions the riches of Sardanapalus: *φυλασσόμενα ἐν θησαυροῖς καταγαίοισι*; PLUTARCH, *Philopæmen*: *κομίσαντες αὐτὸν ἐς τὸν καλούμενον Θησαυρὸν, οἶκημα κατάγειον, οὔτε πνεῦμα λαμβανον οὔτε φῶς ἔξωθεν, οὔτε θύρας ἔχον, ἀλλὰ μεγάλῳ λίθῳ περιαγομένῳ κατακλειόμενον, ἐνταῦθα κατέθεντο καὶ τὸν λίθον ἐπιρράζοντες ἀνδράς ἐνόπλους κύκλῳ περιέστησαν.*

³ Homer calls Mycenæ *πολύχρυσος*, “rich in gold”; and Achylles finds no better way of expressing his indignation of the injury inflicted upon him than by roundly telling the Achæan envoys that he will never yield to their entreaty, not if they offered him all the wealth amassed at Orchomenos or Egyptian Thebes, whose houses are filled with precious objects (*Iliad*, ix. 381, 382).

demur. The first serious objectors were Welcker and E. Curtius; the latter, with the true intuition of genius, vehemently asserted the funereal purpose of these buildings.¹ Despite the strong reasons put forward by these scholars, the two hypotheses were left to face each other until the science of the spade clinched the question.

Viewed artificially, it seemed as if the decisive piece of information ought to have come from Argolis, where buildings of a primitive age are found in greater abundance than in any other district; there, however, their prominent position invited profanation in very early days. At Menidi, on the contrary, near ancient Acharnæ, an underground edifice which is neither so vast nor so well built as either of the treasuries at Orchomenos and Mycenæ, but almost a counterpart of these, and erected therefore for a very similar purpose, had been hidden from human gaze in the remote past by accumulations of rubbish.² This monument, when unearthed in 1879, was apparently untouched; for the six skeletons lying on the floor of the chamber were undisturbed, with all their ornaments about them, terra-cottas, glass, and ivory, the funereal character of which was unmistakable. It was self-evident that they had lighted upon a family vault. Subsequent discoveries have confirmed the conclusions deduced at the outset from the finds at Menidi. Hesitation is no longer possible, and we may safely call domed or cupola-tombs the subterranean chambers described above, which Pausanias compared with the pyramids of Egypt,³ and although their number has daily increased, no marked difference is discernible between them (Fig. 88, No. 1). The so-called Treasury of Atreus is not only the biggest, the best-preserved, and most elaborately-decorated specimen of the class, but it also has a double instead of a single chamber: *i.e.* a large circular vault, and a smaller and lower one opening on the right of the principal building.

Six other tombs have been recovered in the district of Mycenæ. Of these the most important occurs due north of the lower town, exactly opposite the Lions Gate. It was partially cleared in 1876 under the superintendence of Mdme. Schliemann, and is

¹ E. CURTIUS, *Peloponnesos*, t. ii. pp. 400-412; WELCKER, *Schatzhäuser oder Grabmaeler in Mykenai und Orchomenos* (*Kleine Schriften*, t. iii. 1850).

² *Das Kuppelgrab von Menidi*, 4to, 1880, 56 pp. and 9 lithographed plates.

³ PAUSANIAS.

FIG. 118.—Cupola tomb next to the Lions Gate. View of the façade.
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generally named after her (Fig. 118),¹ and again by M. Tsoundas in 1891, who however did not clear it completely (Fig. 88, No. 2). M. Tsoundas' unpublished account of his excavations, and Dörpfeld's willingness to oblige, have enabled us to set forth the main results yielded by their explorations. Though scarcely inferior in size to the Treasury of Atreus, it had no lateral chamber; its front, however, was decorated. Without the rampart, on the north-west and eastern slopes of the outskirts of the city, are four other tombs, seemingly of considerable size, and also built of large stone blocks. All the roofs have fallen in; the only visible section is the upper portion of the façade, all the rest lies buried under accumulations. Much then remains unexplored at Mycenæ. In 1888, the Greek excavations cleared another and smaller grave, bringing up their number to seven. It is built in inferior style; the wall is composed of rubble, the stones of the front being alone dressed fair (Fig. 119). Despite the interest which, at the beginning of this century, the descriptions of Gell, Dodwell, Leake, Mure, etc., had caused to centre around the Treasury of Atreus, it was left in precisely the state to which savagery and the elements had reduced it. It is not unlikely that the cavity seen on the top of the tomb is due to a peasant who wished to get into the chamber from above, when the door and passage leading up to it had already been choked up by drift heaped there by wind and rain; a natural and frequent occurrence in front of all these graves when left to themselves. The passage would seem to have been re-opened and partially cleared to admit the earliest visitors whose account has come down to us. They found the door-frame buried up to the middle, and dirt inside the vault, for shepherds were wont to use it as a shelter, and drive in their flocks in stormy weather and the noon-day heat. The drawing figured below (Fig. 120) shows the building as it appeared in 1856, when I saw it for the first time; whilst Fig. 121 is a faithful representation of it after the excavations of 1878, when door-frame, chambers, and passage were laid bare down to the regular soil by Stamakis, at the expense of the Archæological Society.² The scanty remains of columns,

¹ SCHLIEMANN, *Mycenæ*.

² Παρτικιά. Schliemann does not seem to have touched the Treasury of Atreus strictly so called, for he only mentions having opened in 1873 a couple of trenches in the side-chamber (*Mycenæ*, p. 102).

capitals, mouldings, and the like which formerly graced the façade were carefully put together and stowed away. Had an architect seen this front about the year 1800, he would have found to his hand almost all the requisites for a restoration, without having to call in the help of conjecture; for at that time some of the sculptured stones were still in position, whilst the rest, in a fragmentary state, was lying on the ground around the tomb. Unfortunately the artists and archæologists of that day had no eye or thought for anything that was not classical; and the style exhibited here

FIG. 119.—Small domed-tomb.

looked so peculiar and strange that nobody felt inclined to take up so unpromising and thankless a task. The interest evinced by travellers in these odd-looking mouldings who visited the place since Lord Elgin's agent (1802-1803), translated itself into the barbarous form of taking with them all they could conveniently carry. Hence it is that the *disjecta membra* of this façade are now distributed in the public collections of London, Berlin, Munich, and Carlsruhe; British subjects in this line being perhaps the greater sinners. Greece in those days had no railroads; many a large block had to be broken ere it could go on the

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FIG. 120.—The so-called Treasury of Atreus before the excavations.

pack-saddle; thus, says Leake, within a few years they have all but disappeared.¹ Some of these stones have been re-used by the villagers of Charvati in building their houses and church, and many have doubtless crumbled into dust or been wantonly destroyed. The excavations carried on by Veli, governor of Morea, in Mdme. Schliemann's Tomb, between 1808-1810, are said to have yielded a large number of gold and silver objects to the pasha, very similar to those found in the graves on the acropolis and the vault at Vaphio. Statues, it was alleged, had also been discovered; but I hold this as most unlikely. All that Veli cared about was the finding of treasures; to him, art in any shape was a matter of no concern. His workmen sounded no doubt the depths of the vault, and there mayhap they came upon the grave with all its furniture intact; the deep layer of earth covering it had been its safeguard up to that day.² Be that as it may, there is no doubt as to our loss being irreparable; whilst it is in the last degree unlikely that either on Mycenaean soil or elsewhere a domed building will be found which, in amplitude of dimensions or ornamental scheme, can compare with the Treasury of Atreus, of which we shall present a restoration, despite the difficulties besetting our self-imposed task. The bee-hive graves were left in solemn solitude on this vast area of ruins until 1887-1888, when M. Tsoundas, for the Archæological Society, opened another series of tombs that are decidedly coeval with the domed-chambers, but slightly different from them in some minor points.³ They resemble the shaft-graves on the acropolis in being rock-hewn, but in plan and details they approach the domed-chambers.⁴ A passage cut in the rock, now horizontal, now slightly inclined, usually some yards long, leads through a doorway to a rectangular chamber (Figs. 122-124). The roof now assumes a double, now a quadruple slope (Figs. 125, 126), and is

¹ LEAKE, *Morea*: "On my former visit to Mycenæ there were several large fragments of these semi-columns lying on the ground; I can now find only one or two very small pieces."

² On Veli's excavations see SCHLIEMANN, *Mycenæ*, and above all, CH. BELGER, *Beiträge zur Kenntniss, &c.*, who has gathered together all the conflicting evidence relating to them. He thinks that there is hardly any doubt as to the explorations having taken place, but that the site of the finds is conjectural; these may have come out of the side-chamber of the first tomb, or the single vault of the second, or from both places of burial.

³ TSOUNDAS.

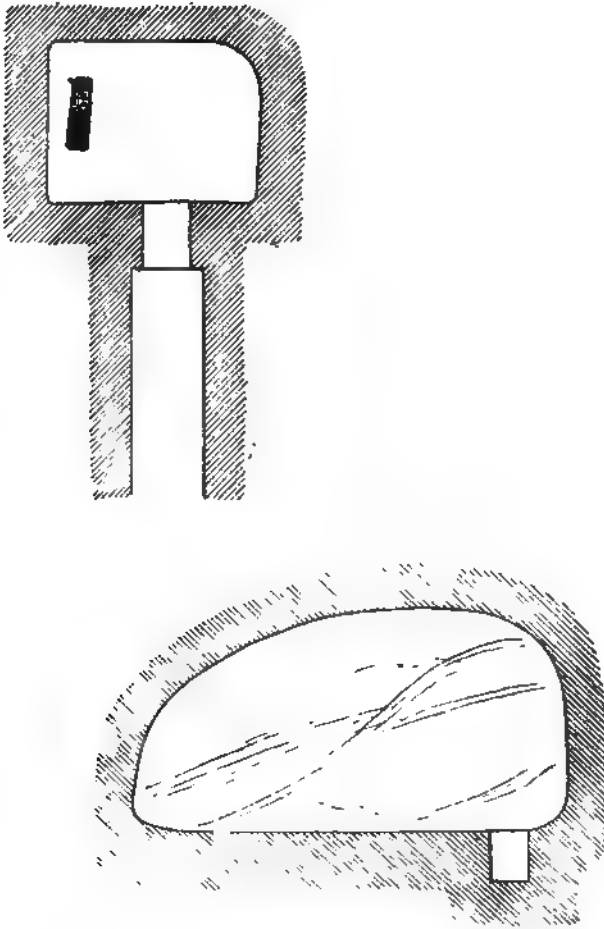
⁴ *Ibid.*

sometimes hewn into an irregular vault (Fig. 124); and sometimes, though rarely, we find a second and smaller division at the back of the vault (Fig. 127) or at the side (Fig. 128), separated from the main chamber by a very short passage, referred to above. The chambers average from three to four metres by four or five metres; and reach a height of two or two and a half metres at the sides, and three metres in the middle, under the gable.

These tombs do not form a single cemetery, but are scattered about in groups of five, twenty, or more among the ruins of the lower city, mustering particularly strong at the point called Asprochoma (Fig. 88). The fact that a number of graves were discovered in the inhabited regions, points to the dead having been interred among their own people, where they had lived. This primitive custom will prevail throughout the monarchical period. But when the old hereditary dynasties shall have made way for the city, the citizens, now members of the body politic, will feel a personal interest in moving towards the Agora, where new regulations are tossed this way and that way before they become law, tribunals where these same laws are enforced, halls where magistrates hold their sittings, temples where sacrifices are offered for the public weal, theatres where every soul is stirred by emotions common to all. The houses of the citizens will cluster around these buildings, where the best and noblest portion of their life will be spent; a wall will enclose this new quarter, which new conditions of existence have brought into being, so as to guard it against a sudden assault. Then will their burial-places be transferred beyond the circuit, now too narrow to contain them, and each town will have its cemetery or cemeteries by the way-side leading to its gates. Some Greek cities, however, especially Sparta, reluctantly adopted the new change; the latter was not enclosed by a circuit-wall until the reign of the tyrant Nabis, in the third century B.C. Two hundred years before, Thucydides, writing of Sparta, had said: "Should ever Lacedæmon be razed to the ground, and should none of her temples or other public buildings remain except the foundations, having had no circuit-walls, later generations would deem that her fame had been over-rated, and had far transcended the power she once had wielded. As the Spartans have not gathered around a common

FIG. 121. — The Treasury of Atreus. Present state.

centre, their city is destitute of public buildings and stately temples, for they live in open villages [*κατὰ κώμας*], according to ancient usage. Hence a very imperfect notion would be gained of what they once had been; whereas, under the same circumstances, the aspect the ruins of Athens would present



FIGS 122, 123, 124.—Plan of rock-hewn tomb. Section through door and longitudinal section of vault.

would give an impression of its having been as influential again as reality.”¹ Conservative Sparta, therefore, continued to bury her dead within the precincts of the town.² The custom had also prevailed at Athens in olden times, as numbers of rock-cut graves found within the inhabited area amply testify. This

¹ THUCYDIDES.

² PLUTARCH, *Lycurgus*.

fact led Plato to infer that the old Athenians were in the habit of burying the dead in their houses.¹

It may be safely inferred, therefore, that each group of graves opened by Tsoundas was the burial-ground of a separate family or clan. Under what names were the several divisions of the people known at Mycenæ? Did the terms *γένος*, *φρίτρη*, or *φρατρία* already obtain, or did they not come into being until we find them in use throughout Grecian land? And were *φρατρία* grouped into *φυλαί*, tribes? We know not; but it is

FIGS. 125, 126.—Plan and transverse section of rock-hewn tomb.

self-evident that each of these small clans had its separate spot in the common territory, a demarcation line dividing them off according to their importance and wealth.² Thus, at one place the graves are few in number and abound in another; poor and nearly empty at this point, and there brimful of valuables.³ The fact is, that each clan then as now was made up of well-to-do and poor people. The mode of closing these graves, thanks

¹ PLATO, *Minos*.

² Practically no isolated graves have been found; hence the inference that each *γένος* had its separate place of interment.

³ A single grave had been disturbed out of the fifty-two excavated by Tsoundas.

to which they are still intact, is the following: When the last body was placed in the vault, the doorway was walled up with dry stones, and the passage in front of it filled with earth. This was rammed down in such a way that in time it almost acquired the consistency of tufa, hence to-day the pick-axe has to be employed in breaking it. Grass soon grew over it, and helped to keep inviolate the secret of the grave.

Having regard to the foregoing observations, the royal cemetery, as might have been expected, was discovered within the

FIG. 127.—Plan of rock-cut tomb.

FIG. 128.—Plan of rock-cut tomb.

citadel circuit, by the Lions Gate, where the Mycenaean princes were domiciled; to these may be added the bee-hive graves, the presumption being so strong for two at least out of the number as to amount almost to certainty. For whom except the rulers of a great hegemony would buildings, accounted masterpieces of Mycenaean art, have been erected and sumptuously decorated? Yet the domed-buildings not only lie scattered in the lower city, away from the castle, but it is agreed on all sides that they are later in time than the shaft-graves of the stone circle. But how and why this came about is not clear. We

may suppose that want of space in the citadel counselled the transfer of the burial-ground to the lower city, where as much room as was required to dower the single graves with the needful stateliness could be had at will. Perhaps also because on the acropolis the limestone which on many points comes to the surface is much harder than the tufaceous mass of the lower town; where, too, the layer of vegetable earth was much deeper, so that the chambers in question could be erected with much greater ease. If, as there is some reason to think, the princes who built this class of tombs were aliens to Grecian soil, it was necessity which impelled them to seek beyond the castle-precincts a site which would permit them to retain habits contracted in another land, but endeared to them by old associations, and which they acclimatized in their adoptive home.

It remains to notice the ancient road-tracks which Steffen and Lolling discovered at the approaches of Mycenæ (Fig. 88),¹ and which were built to connect the town with the Heræum, situate at the head of the plain of Argos in one direction, and on the other with Corinth. Three different roads led to the latter, across the steepy heights parting the two townships. In pre-Homeric times alone the hegemony of Mycenæ had been important enough to be the centre towards which converged the high-roads of the region. After the Dorian conquest Argos stepped in the foremost rank, and Mycenæ, being too far removed from the sea and the fertile tract of land skirting it, fell in the rear. The Cyclopæan style of masonry seen about these road-tracks and bridges cast athwart precipitous ravines, proves that they are coeval with the oldest portion of the citadel circuit and the sustaining walls of the lower town (Fig. 129). Every precaution was taken to secure these roads against invasion. Here a watch-tower rears its head at the entrance of a defile; there a fortified square has been levelled out, spacious enough to hold three or four thousand men.² The most curious of these entrenched camps occupies the summit and part of the crest of Mount Elias,³ at an altitude of 800 metres. It is fenced in by a rampart wherever the rocky side does not dip vertically. West and east of the summit are sheltered nooks and hollows, which show traces of small, ill-built houses, proving that the fortress was actually garrisoned. The question naturally arises, why and

¹ STEFFEN, *Karten von Mykenai*.

² *Ibid.*

³ *Ibid.*

FIG. 129.—Cyclopean bridge on the road to the Herreum.

wherefore so great and needless a defensive display on this elevated top? An enemy before the gates of Mycenæ might well leave the force entrenched on that barren rock to starve or surrender of its own accord. No more satisfactory explanation can be given, except that in their love of building, the garrison, finding an abundance of boulders to their hand, amused themselves, for want of any other pastime, in heaping them upon one another.

On the other hand, no better spot could well have been picked out for a post of observation. From the summit the eye sweeps over the heights of Argolis far and near; starting from the Saronic Gulf round to the Argian Bay, it follows the windings in and out of the valleys from which a hostile force would be seen to emerge on its way to Mycenæ. In the *Agamemnon* of Æschylus, Clytemnestra informs the Chorus that the longed-for news, which from signal to signal was to announce the fall of Troy, has reached the palace in one day, the night-watcher having seen it on Arachnaion, the last and next station to the town.¹ The poet, however, is mistaken as to the precise spot. Had the fire which gladdened the old man's eyes, aweary with long watching, been lit on Mount Arachnaion, the mass of the Zara, interposing between it and Mycenæ, would have effectually prevented its being seen by the night-watcher; the last signal-post, therefore, must have been placed on Mount Elias, whence alone it could be perceived by the whole town; that is to say, were it possible to believe the testimony of Æschylus, and that optical telegraphy was known at that remote period. Attic tragedians, with the exception perhaps of Euripides, had no personal knowledge of Mycenæ.² The latter is the only one who gives the impression of having seen its imposing ruins, for he repeatedly mentions that its stupendous walls were built by the Cyclopes.³

Thus his Hercules exclaims: "I am going to Mycenæ, whither I must take levers and spades, recurved iron implements

¹ ÆSCHYLUS, *Agamemnon*—

. . . Εἴτ' ἔσκηψεν, ἔστ' ἀφίκετο
'Αραχναῖον αἶπος, ἀστρυγέονας σκόπας.

² Strabo remarks on the lame topographical knowledge of the Tragedians, their perpetually confounding Argos with Mycenæ.

³ EURIPIDES.

with which to deal great blows and bring down the foundations so admirably adjusted by the Cyclopes¹ with the pick and red ruler." Such touches as these may be reminiscent of the astonishment which the poet felt when faced by these stately ruins, or they may be due to his dilettantism, which prompted him to complete his picture with local colouring, in which his eminent competitors were woefully deficient. One is tempted to believe that Thucydides himself never saw Mycenæ; had he walked over these vast ruins and glanced up at the great domed-building with its spacious nave, had his eye rested on the citadel walls and their remarkable portal, he would not call Mycenæ "a small town like all those of that period."² If in a far more ruinous state than they were in the day of Thucydides, the Mycenaean monuments still conjure up the picture of a once populous centre, of wealthy and powerful rulers who were served in their great architectonic enterprises by a number of well-trained artisans, there is all the more reason why they should have suggested the like, nay even more forcible, notion on a sagacious observer such as the great Athenian undoubtedly was, ere more than twenty centuries of neglect and ill-usage had weighed on them. Pausanias would really seem to have been the first in antiquity who thought it worth while to break his journey by a *détour* of a couple of hours on his way to Corinth, that he might have a look at what had been the capital of Agamemnon. One is amazed to find in so diligent and well-informed a traveller as Strabo the following erroneous entry: "Mycenæ has been so entirely destroyed by the Argives that no trace of it remains at the present day."³

Having now gone over the ground formerly occupied by the Mycenians, and surveyed what still remains above ground of their buildings, as well as those that have been discovered during

¹ EURIPIDES, *Hercules Furens*—

Πρὸς τὰς Μυκήνας εἶμι· λάζεσθαι χρεῶν
μόχλους ἐκέλλας θ', ὥς τὰ κυκλώπων ραῖθρα
φοινίκι κανόνι καὶ τύκοις ἡρμοσμένα
στρεπτῷ σιδήρῳ συντριανώσω πάλιν.

² THUCYDIDES: Καὶ ὅτι μὲν Μυκήναι μικρὸν ἦν, ἢ εἰ τι τῶν τότε πόλισμα νῦν μὴ ἀξιόχρεων δοκεῖ εἶναι . . .

³ STRABO: Χρόνοις δ' ὕστερον κατεσκαφῆσιν ὑπ' Ἀργείων, ὥστε νῦν μὴδ' ἵχνη εὐρίσκεισθαι τῆς Μυκηναίων πόλεως.

the last thirty years, the time has come to approach a minor question, but one not destitute of interest; namely, how are we to understand the passage of Pausanias relating to these antiquities,¹ the sole writer in Hadrian's time who, though he does not give a full account of them, has yet indications sufficiently distinct to enable us to recognize the particular monuments he describes; at times, however, the student does not know what to make of the evidence he has before him? With Schliemann he would like to believe that the shaft-graves on the acropolis are those mentioned by Pausanias; but he is arrested on the threshold by grave objections. Let us weigh every word of the passage which has given rise to so much discussion, but which has not, as it seems to me, been subjected to a sufficiently close scrutiny, and see if the question can be settled that way. Enough allowance has not been made for elements of a widely different nature which the author may have fused together into his narrative.

Let us turn to Pausanias: "Some remains of the circular wall and the gate which has lions over it are still extant. These were erected, they say, by the Cyclopes who made the wall at Tiryns for Præteus."² All this is as clear as noon-day: "the gate over which stand lions" is our Lions Gate, and the *περιβόλος*, or circuit in which it opens, is the citadel wall. Next we have: "Among the ruins of Mycenæ is the fountain called Perseia and the subterranean buildings of Atreus and his children, in which they stored their treasures."³ That Pausanias, when writing this, was looking in spirit at the citadel from the outside, is proved by his mention of the Perseia, for no spring exists within the circuit; and one is inclined to think that he never entered it, but was satisfied with a superficial glance at the Lions Gate. Had he passed it, he could scarcely have failed to notice the temple built over the old palace, as well as the substructures

¹ We follow Belger's closely-reasoned criticism of the passage in question, which the reader will find in the second part of *Beiträge zur Kenntniss, &c.*, and also in his articles on Schuchardt's book.

² Λείπεται δὲ ὅμως ἔτι καὶ ἄλλα τοῦ περιβόλου καὶ ἡ πύλη· λέοντες δὲ ἐφεστήκασιν αὐτῇ. Κυκλώπων δὲ καὶ ταῦτα ἔργα εἶναι λέγουσιν, οἱ Προῖτῳ τὸ τεῖχος ἐποίησαν τὸ ἐν Τίρυνθι.

³ Μυκηνῶν δὲ ἐν τοῖς ἐρείπιοις κρήνη τέ ἐστι καλουμένη Περσεΐα, καὶ Ἀτρέως καὶ τῶν παίδων ὑπόγαια οἰκοδομήματα, ἐνθα οἱ θησαυροὶ σφισι τῶν χρημάτων ἦσαν. It will be observed that Pausanias calls the Perseia κρήνη and not πηγὴ. For him, πηγὴ is a natural spring, whereas κρήνη is a fountain provided with a reservoir, channels, etc.

on the summit of the hill, which must have been much more prominent in his day than before they were cleared by the late excavations. Be that as it may, ἐν τοῖς ἐρείπιοις ("among the ruins") can only apply to the vast area covered all over with ruin and soil which surrounds the acropolis in every direction; nor is there any difficulty in identifying the "subterranean buildings of Atreus and his sons, where they hoarded their treasures," with our domed-buildings. We know from Pausanias himself what notion was suggested to his mind by the word θησαυρός, "treasury."

Again: "There is the tomb of Atreus, and the tombs of the companions of Agamemnon, who on their return from Ilium were slain at a banquet by Ægisthus. The authenticity of the tomb of Cassandra is denied by the Lacedæmonians of Amyclæ, who claim that she is buried in their midst. Then, too, there is the grave of Agamemnon and that of Euremedon, his charioteer: and the same tomb covers Teledamus and Pelops, the twin babes of Cassandra, whom Ægisthus murdered together with their parents. Furthermore, according to Hellanicus, 495-411 B.C., Electra, whom Orestes gave in marriage to Pylades, lies buried here, by her two sons, Medon and Strophius. Clytemnestra and Ægisthus were entombed at a little distance from the wall, because they were deemed unworthy to have their burials within it, where Agamemnon and those who were murdered with him reposed."¹

How are we to identify these tombs, and in which of the burial-places of Mycenæ should we look for them?

In the study of ancient writers, no detail, however trifling, should be passed over. Thus, Pausanias connects the sentence

¹ Τάφος δὲ ἔστι μὲν Ἀτρείως, εἰσι δὲ καὶ ὅσους σὺν Ἀγαμέμνονι ἐπανάγκοντας ἐξ Ἰλίου δειπνίσας κατεφόνευσεν Αἰγισθος· τοῦ μὲν ἱὴ Κασσάνδρας μνήματος ἀμφισβήτησαι Λακεδαιμονίων οἱ περὶ Ἀμύκλας οἰκοῦντες· ἕτερον δὲ ἔστιν Ἀγαμέμνονος, τὸ δὲ Εὐρυμέδοντος τοῦ ἡνιόχου, καὶ Τηλεδάμου τὸ αὐτὸ καὶ Πέλοπος, τοὺτους γὰρ τεκεῖν διδύμους Κασσανδραν φασί, νηπίους δὲ ἔτι ὄντας ἐπικατέσφαξε τοῖς γονεῦσιν Αἰγισθος, καὶ Ἡλέκτρας [καὶ τῶν παιδῶν]. Πυλάδῃ γὰρ συνήκυσεν Ορέστου δόντος. Ἑλλάνικος δὲ καὶ τὰδε ἔγραψε, Μέδοντα καὶ Στροφίον γενέσθαι Πυλάδῃ καὶ Ἡλέκτρᾳ ἐκ Ἡλέκτρας. Κλυταίμνηστρα δὲ ἐτάφη καὶ Αἰγισθος ὀλίγον ἀποτέρω τοῦ τείχους, ἐντὸς δὲ ἀπεξιώθησαν, ἔνθα Ἀγαμέμνων τε αὐτὸς ἔκειτο καὶ οἱ σὺν ἐκείνῳ φορευθέντες. Three words seem to have been dropped out by the scribe after the first Ἡλέκτρας, relating to her marriage and progeny, quoted from Hellanicus; γὰρ has no business here and is meaningless, unless, as Belger proposes, we re-insert in the text καὶ τῶν παιδῶν (*Berliner phil. Wochenschrift*, 1891).

just cited having the prefix $\delta\acute{\epsilon}$ with the preceding one, as he had done before in enumerating the buildings of the acropolis and those of the lower city. This always indicates with him that he is passing from one subject to another,¹ as anybody may see for himself by opening his *Itinerary* almost haphazard. Now the copulative conjunction $\delta\acute{\epsilon}$ when met with in Pausanias, should be rendered by "then, again," and not "but," as is usually done. Remembering this peculiarity of our author, the word $\delta\acute{\epsilon}$ occurring where it does is an intimation, a warning so to speak, that the tombs he is about to handle are quite different from the treasures alluded to in the pages that went before, and are not to be confounded with them either in plan or situation. But where was the site? Unfortunately, Pausanias is not very precise on this head; his words, however, contain an indication which, if rightly understood, would narrow the field of our researches. The circuit within which all the tombs, save two, were found, is not that of the lower city. The two quarters parted by this wall had no very special character of their own; all the interments of the lower plateau, domed buildings and shaft-graves alike, are scattered indiscriminately on this or that side of the minor rampart. The true circuit, the only important one, enclosed the acropolis, the royal city, whence were excluded the mortal remains of murderers and adulterers.

The wall, τὸ τεῖχος, referred to by Pausanias, is the circuit (περίβολος) of his first paragraph, both words being used by him to designate the same object. He applies the first to the rampart behind which the Mycenians entrenched themselves and repulsed the Argives, until famine obliged them to surrender. The exceptional situation of the acropolis, the stupendous strength of the fortifications erected by the fabulous Cyclopes, could alone make good the fearful odds between besiegers and besieged. Pausanias is careful to note that this and the wall by the Lions Gate were built in the same style as the rampart at Tiryns;² and if he only mentions the citadel enclosure, it is because he saw

¹ The remark comes from BELGER (*Berliner phil. Wochenschrift*).

² PAUSANIAS: Μυκηναίοις γὰρ τὸ μὲν τεῖχος ἀλῶναι κατὰ τὸ ἰσχυρὸν οὐκ ἐδύνατο ὑπὸ Ἀργείων· ἐτετείχιστο γὰρ κατὰ ταῦτα τῷ ἐν Τίρυνθι ὑπὸ τῶν Κυκλώπων καλουμένον. On the meaning of the word τὸ τεῖχος, see BELGER, *Berliner phil. Wochenschrift*. With Pausanias, τεῖχος signifies the continuous circuit of a fortress or city, and ὁ περίβολος τοῦ τεύχους is frequently employed by him in the same sense.

no other during his hurried visit to Mycenæ. Unlike localities which had preserved their sanctuaries, the place did not detain him because of inscriptions to be read, lists of statues and offerings to be made, or local traditions to be collected, all the lower city had to show were pieces of masonry just visible above ground, the rest having been destroyed by the Argives, and the stones composing it re-used in building the Hellenistic and Roman city; the practised eye of an architect alone could have followed its sinuous line in and out of labyrinthine substructures and ruinous masses. What most impressed the traveller was the rampart of the Perseidæ and Atridæ, boldly flung above the dizzy heights of the ravines, and circling the hill with its ponderous and indestructible courses, the lofty rock being itself enframed and ruled by loftier mountains.

Remembering that the seven or eight tombs of Pausanias were supposed to be "within" the circuit, and that all our domed-buildings are "outside" it, the theory which would identify them with the former falls to the ground; besides which, neither Pausanias nor his contemporaries suspected the funereal character of the bee-hive erections, and looked upon them as treasures. It being clear that the graves which have been opened on the acropolis are not those cited by Pausanias, we are left to face two hypotheses: either these tombs are still buried somewhere within the area enclosed by the Cyclopæan wall, or else they are the shaft-graves of the stone-circle uncovered by Schliemann. There is not much probability that the first assumption is correct. If the acropolis has not yet been thoroughly explored, and finds may still be expected from that quarter, the western side of the platform, and the gentle acclivities above which rose the palace, exhibit house foundations seemingly closely serrated the one against the other. It would have been vain to find in this region space for the lodgment of all the royal tombs, except by the Lions Gate, or in that species of blind alley to the eastward of the citadel. Now, remembering the traditions that were still afloat in the time of Pausanias in regard to the royal sepultures, is it likely that they would be relegated to a remote corner of the acropolis, with no means of egress save a narrow postern leading to the open country? It seems much more natural to place the site at the entrance of the upper city, by the road along which

passed the movement to and fro between the town and the stronghold, where the reigning family lived, surrounded by men-at-arms, and troops of servitors and slaves. Here, too, their situation was much more suitable for receiving the expressions of regard, the expiatory offerings and annual sacrifices of successive generations. It is on this very spot that Schliemann lighted upon graves which, for reasons presently to be adduced, appear to have been the special object of reverence during a long series of years. Everything about these tombs was calculated to convey this impression: there is the astounding magnificence of the furniture of each grave, the memorial stela placed above it to the dead lying beneath, including bones heaped up high over the sepultures, the remains of victims burnt on the altar, in order that their blood and fat should trickle below and so feed the shades of great ancestors, who, in their temenos-like burial-place, were neither to hunger nor thirst. Nor is this all: the number of graves enclosed by the stone fence exactly corresponds with that given by Pausanias. If this be so, it is not because Schliemann was minded to discover six graves and no more; since, as will be remembered, Stamakis stumbled upon the sixth just as the excavations were about to close.

Perfect agreement, then, exists between literary evidence and the result of the excavations, both as to the position of the royal burial-ground and the number of the graves. It were passing strange, and unparalleled in the annals of archæological research, should it turn out to be mere coincidence. The testimony of Pausanias so exactly harmonizes with the cemetery by the Lions Gate, as to render the conviction irresistible that the graves opened by Schliemann are those described by Pausanias. But even assuming the identification to have been proved does not dispose of every difficulty. How are we to explain that, having inspected the domed-graves of the lower city, Pausanias should have gone back to the citadel which he had previously visited, and without a word of warning he should forthwith have described the monuments rising before him? Even supposing that in this particular instance he was more careless than usual, or that his note-tablets fell out of order, it is hardly conceivable that the bee-hive graves of the lower city and the citadel rampart, which some twenty years ago

were discovered lying under so deep a layer of silt and potsherds, could have been visible in the second century of our era. The open space which was levelled out over the graves is overhung by steepy heights, up which were staged domestic dwellings parted by narrow alleys; rain turned these into so many streamlets, charged with dust and refuse which they would have poured upon the graves, had not the ring of slabs intervened and thrown them back to the northward, where they met a gutter built to receive them.¹ If the slabs in question were deeply sunk into the ground, and adjusted with so great a nicety to one another, it may have been to guard the sacred spot against periodical inundations rather than rude intrusion. When the citadel was left desolate, the runlet between the ring of slabs and the foot of the hill was soon filled up with accumulations brought by wintry rains. Finding no outlet, the streamlets rushed against stelæ and slabs, discharging their contents on all; some turned over and lay where they fell, others kept their erect position, but in the end all disappeared under alluviums and huge stone blocks from the adjacent houses. This work of devastation and consequent accumulations must have set in the day after the inhabitants were driven from the place. Hence, though in some respects well chosen, the site of this burial-place had its drawbacks, and required constant watching and repairs. Even supposing that the Argives did not wantonly destroy the monuments which they found in the fortress when they entered it, it may well be that, left to themselves, a hundred years after the fall of Mycenæ they were already as effectually hidden from human gaze as when Schliemann riddled the shroud of mud and pebbles which covered them.²

But if so, how are we to account for the fact that Pausanias mentions sepultures of which no external sign existed when he visited the place, and that he assigns to each the name under which it was known at Mycenæ? In our opinion the problem admits of but one solution, which we are about to expound, and which some have called subtle and forced;³ whereas to us it

¹ STEFFEN'S map.

² Schliemann (*Mycenæ*) and Schuchardt (*Schliemann's Ausgrabungen*) are both agreed on the subject.

³ SCHUCHARDT, *Schliemann's Ausgrabungen*.

appears at once so natural and ingenious, based too on just appreciation of the literary habits of Pausanias, that we have no hesitation in espousing it. Is it self-delusion to feel as if Christian Belger had only forestalled us? We are not of those who are inclined to think of Pausanias as a "chamber traveller";¹ the contrary thesis appears to me demonstrated; it has for it the thoughtful approval of men having a practical knowledge of the principal monuments of Greece, which they inspected with Pausanias in their hand, and are thus entitled to be heard. That Dörpfeld is no mere book-worm the excavations at Olympia and elsewhere are there to testify; yet he is firmly convinced that Pausanias visited Altis and noted down on the spot the relative position of the main buildings, registering names and votive inscriptions which he found engraved on bronze and marble. Nevertheless, in ancient as in modern times, travellers and even tourists have seldom failed to check, and above all complete in their library, notes taken in their journeyings with the assistance of books. However clever and painstaking, no one man is capable of seeing everything by himself, whilst statistical, historical, and other details requiring patient research, must be sought from authoritative works. No matter how many years it took Pausanias to accomplish his circular journey of Greece, when he began to collate his materials for writing his book, he could no more dispense with references which he found at hand, than his modern colleagues, Joanne, Baedeker, and the like. Pausanias had no local guides at Mycenæ to go over the monuments with him, and pour into his willing ear the myths pertaining to them. Here or never was the oppor-

¹ No one had dreamt of challenging the reality of Pausanias' travels until quite lately. The dispute opened in 1877 by von Willamovitz-Möllendorff has been going on in Germany ever since; Möllendorff scouts the notion that the Greek traveller obtained his information on the spot. He is followed by G. HIRSCHFELD (*Pausanias und die Inschriften von Olympia*, in *Archæologische Zeitung*, 1882), and somewhat more circumstantially by KALKMANN (*Pausanias der Perieget*, Berlin, Reimer). Both writers try to show that Pausanias chiefly compiled from literary sources, that his description of Olympia was taken from Polæmon and other travellers, and in consequence of it resembled the city of the Macedonian epoch rather than the Olympia of the second century of our era. These accusations were met by a very sensible paper from GURLITT, in which the veracity of Pausanias is warmly upheld (*Ueber Pausanias*). Readers wishful to improve their French will find almost a complete list of the literature relating to this question in *Revue historique*, and in two articles by A. HAUVETTE (*Revue critique*).

tunity of consulting Hellanicus, his favourite author in matters relating to the beginnings and traditions of Greek cities. This antiquarian had published two volumes on Argolis, entitled *Phoronæ* and the *Priestesses of Argian Hera*. From Hellanicus was taken the piece of information respecting Electra's marriage and offspring; but we are inclined to think that he not only borrowed this, but the whole passage relating to the graves of the Atridæ, in order that he might clothe with a little flesh his meagre description of Mycenæ. Do what he would he could not prevent its being dry and lifeless, a mere bag of bones when compared with the fullness of his account of Argos and other celebrated localities. Tradition places the birth of Hellanicus in the year of the battle of Salamina (480 B.C.);¹ his list, therefore, of the Myceniian graves may have been made on the spot. At any rate there can be no question that he wrote before Herodotus, and above all Thucydides, by whom he is somewhat severely handled.² We may assume that his visit to Argolis and the temple of Hera, hard by Mycenæ—during which he transcribed the catalogue of the eponym priestesses of the goddess—took place in the first half of the following century. Even then Mycenæ was already a heap of ruins; but too short a time had elapsed since the sack of the city (468 B.C.) to have wrought any perceptible change in the state of the monuments, or caused the inhabitants to forget names around which clustered so many associations. The royal burial-place was then not only visible, but mayhap with its ring of polished slabs and strange stelæ almost intact.

If our explanation be found inadmissible, the choice must rest either with Schliemann's or Schuchardt's hypothesis. According to Schliemann, at the time of Pausanias' visit to Mycenæ stelæ and slabs had long lain buried under accumulated silt; the traveller, however, was shown, if not the actual graves of the Atridæ, the site where they were reputed to rest.³ But we submit that the words used by Pausanias do not lend themselves to be so interpreted. "There is," he says, "the tomb of Atreus . . ." and so on, enumerating them one after another as

¹ *Life of Euripides*.

² DENYS OF HALICARNASSUS, *Letter to Pompey on the Greater Historians*, § 3. THUCYDIDES.

³ SCHLIEMANN, *Mycenæ*.

one who had seen them. This manner of describing things of which he had no personal knowledge, and which may be attributed to tricky exposition, is no strong argument against Schliemann's theory; what condemns it in our eyes is the fate of the town. We know that the entire population was forcibly sent into exile, states Pausanias, or, as Diodorus gravely asserts, reduced to slavery;¹ adding that "the site of Mycenæ has remained uninhabited until the present day." This is hardly correct; late discoveries have confirmed Schliemann's observations to the effect that the potsherds covering the area of the acropolis did not belong to the best period of Greek pottery, but were manufactured by the Hellenistic town, garrisoned by Macedonians, which seems to have lived at amity with Argos. The latter having lost its independence, had forgotten its old hatred, or at least lost the power of satisfying it. How long did these buildings preserve some show of importance? We know not; save that a few husbandmen tilling the land which descends into the valley of Cephissus, shepherds wandering in and out of the ruinous palaces of the heroes, were inadequate to pick up the thread of the existence which had been suffered to remain so long in abeyance. Is it conceivable that for three hundred years at least, field labourers and isolated huntsmen faithfully and accurately handed down the secret of these unseen sepulchres, together with the names of their heroic inmates? We wot not. Nevertheless, should we be required to choose between the two theories facing each other, we should assuredly side in with Schliemann rather than Schuchardt.

According to Schuchardt, the buildings that were shown to Pausanias as the tombs of Atreus, Agamemnon, and his companions in death, are no other than the bee-hive graves of the lower city.² He lays stress on the fact that, like those of Pausanias, these tombs are six in number. In the first place, we would observe that the tale reaches now to seven, and therefore no longer corresponds; but what is much more important is, that Pausanias places the tombs within a circuit wall, but the only bulwark he can have seen at Mycenæ was the citadel rampart. Furthermore, it is plain from his description of Mycenæ, and the fuller account of the stately sepulchre at Orchomenos, that Pausanias accounted the domed-chambers as treasuries.

¹ DIODORUS.

² SCHUCHARDT, *Schliemann's Ausgrabungen*.

This of course Schuchardt knows very well, and he can cite Greek as well as anybody, including the passage relating to the so-called Treasury of Minyas; but he tries to get out of the difficulty on the plea that the notions of Pausanias respecting the graves under discussion were of the vaguest, since he calls them treasuries at one place and tombs at another. We owe a debt of gratitude to Pausanias for much that he alone can tell us; but this does not blind us to his shortcomings. We have no very exalted notions as to the extent of grasp, or his accuracy as a writer; to assume, however, that he was so loose and indifferent about the words he used is equivalent to saying that he did not know their meaning, thus bringing him down to a level little removed from that of a boor; and this we cannot concede. The type in question is distinct enough—nay, so distinct that, once Pausanias had seen it, he was not likely to confuse it with any other, but henceforth would connect it with a certain and uniform destination—whether true or false is beside the question. What this notion was we know from the two passages relating to the subterranean domed-buildings of Argolis and Bœotia, respecting which there can be no two opinions. According to Schuchardt, tradition connected the bee-hive graves, which, along with the fortress walls, were most prominent among the ruins, with the heroes of Homer and of the Tragedians, whilst some of the rock-excavated graves recently uncovered were shown to strangers under the title of “Treasuries of Atreus and his children”; but this assumption, by which Schuchardt tries hard to please all round, and soothe his conscience as a critic, will not bear looking into. It cannot be denied that these graves have a far-off resemblance to the Treasury of Minyas, which for Pausanias constituted the model of that class of buildings, but the features which most struck the Greek writer are to seek in them. Here is no circular form, no beautiful stone blocks set out in regular courses, no make-believe vault. Finally, all the tombs were found intact; one alone had been disturbed, probably by gold-seekers long after the Roman period. It is self-evident that if all these graves were discovered the other day, with all their contents untouched, they could not have been seen by the idlers and visitors generally of the second century of our era; accordingly, they cannot be the chambers which Pausanias compared with

the architectural master-piece of the wealthy and industrious Minyans.

It is not well then to say, as has been said, that Schliemann's most brilliant discovery was due to a misconception. The tombs he unearthed at the entrance of the acropolis are those which the fallen city, but justly proud of her past, reverently honoured down to the day of its destruction. To judge from analogy, the graves which went by the names of Clytemnestra and Ægisthus, lying some way beyond the wall, would seem to have been vaults hewn in the solid rock, just like the other sepultures attributed to the Pelopidæ. They were not found in front of the Lions Gate, where the soil of Mycenæ has doubtless other surprises in store for us. We should not wonder to hear, some day or another, that M. Tsoundas had lighted upon the twin burials of the lovers and murderers; or maybe the single vat wherein they were said to lie side by side. Pausanias does not tell us whether one or two graves were labelled with their names.

The last question to be discussed is the following: How far was tradition right in assigning to the last of the great Mycenian dynasties the burial-place on the acropolis? Granting the testimony of legend, to whom are we to attribute the equally royal domed-tombs of the lower city? Or should we rather infer that the popular imagination was seduced by the halo of names which poesy had immortalized, and in its self-delusion assigned to the Pelopidæ graves which in reality belonged to the Perseidæ? It seems best to reserve our answer to the end, when the instances of the arts and handicrafts of Mycenæ shall have passed before the reader, and been subjected meanwhile to a close comparison, with a view to determine the relative age of the single objects. Then only will the archæologist deem himself in a position to offer, not too confidently, a probable solution to this obscure problem.

Tombs of the Heræum and Nauplia.

Tiryns and Mycenæ have furnished the finest and best-preserved specimens of the different types of architecture belonging to the primitive period: the palace, the fortress, and the

grave. In them were found clay and metal vases, weapons and instruments, personal ornaments and engraved stones, and what is more, fragments of mural paintings. The history of the art about which we are busy, besides Mycenæ and Tiryns, covers unimportant centres and isolated buildings which have helped to fill in more than one gap and supplement our imperfect data. Without these our picture of Myceniian culture would have lacked completeness and many curious features. Our aim, therefore, will be to make our list of monuments, which folks contemporary with the hegemony of Tiryns and Mycenæ have left on various points of continental Greece and the islands, as perfect as possible.

One might almost be tempted to connect with the Myceniian buildings, a tomb which lies hard by one of the most celebrated temples of Argian Hera; this formed the principal place of worship of the surrounding country, and was its real religious centre. The tomb is ten minutes northward of the Heræum, and nearly three English miles south-east of the Treasury of Atreus, on the road leading from Mycenæ to Argos; the trace of which, here and there, can still be followed on the rock. The grave was discovered by chance in 1872 by a farmer, and the Archæological Society entrusted the ephor Stamakis with the task of excavating it. His report¹ is so good as to make one almost regret that he did not write the account of the clearance of the two principal domed-buildings at Mycenæ.² The tomb is shockingly mutilated. The plan is the same as that of all Myceniian graves with a single chamber (Fig. 130). The roof has fallen in; hence we know not if above the stone beam there occurred the triangular hollow common to this class of buildings. There are three successive huge blocks over the doorway. The inner construction of the chamber is rude enough, but with marked tendency to horizontal beds. The walls at their best barely reach six metres fifty centimetres in height; the whole of the upper part has given way and fallen on the floor, along with its covering of earth. The pavement, on being cleared, showed that it had been laid in mud. Measured at the foot of the wall, the diameter of the circular chamber

¹ STAMAKIS, *ὁ παρὰ τὸ Ἱππῶν τάφος* (*Athenische Mittheilungen*).

² It is to be regretted that Stamakis has not given an inner section of the chamber, which would enable us to restore the dome.

is nine metres seventy centimetres. The objects found in it are of no consequence ; some tiny gold and glass pieces, broken implements of stone, bronze weapons and vases, scraps of Mycenaean pottery, make up the tale. Side by side with these, in the vault and passage, broken pottery, amongst which are two terra-cotta bits stamped with Greek letters of the fifth or fourth

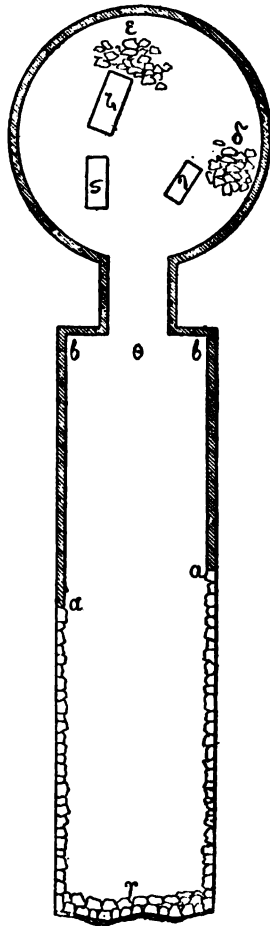


FIG. 130.—Plan of the domed-tomb near to the Heræum.

century and some scraps of iron implements, has been picked up. The furniture belonging to the first inmates of the grave was plundered in antiquity, and the vault was utilized again at a much later date ; when, according to Stamakis, the three rectangular pits shown in the plan, apparently closed by slabs, were sunk. That the tomb was re-opened for new occupiers is indubitable ; the actual pits, however, may after all belong to the

original plan; instances of undisturbed and very similar graves, which may safely be placed in the archaic period, are plentiful elsewhere. On the other hand, one is a little surprised to find the entrance to the passage barred by a wall three metres thick, which does not reach to the lintel, and leaves a vacuum between it and the upper portion of the wall (Fig. 131). Was the empty space intentional, and therefore in the original plan, or due to folk wishful to get inside the vault? We are inclined to think that the wall was made immediately after the first interment; in that its situation and mode of construction vividly recall the walls found at the entrance to the domed-tombs of Attica, and the rock-cut graves of Nauplia. But if the passage has never been

FIG. 131.— Transverse section through δ & ϵ of plan. a & indicates gap left by the removal of squares from the grave when first discovered; δ & ϵ , salient bands; γ , sunk lintel.

closed, as is affirmed by those who have examined the débris of all sorts and different ages found in it, and if the tomb was re-opened several times to let in fresh inmates, why do we find the wall standing? In what way were the dead introduced into the tomb? Are we to infer that the bodies were lowered through the gap between the lintel and the wall, or a hole pierced in the roof? Or did they rebuild the wall after each inhumation? The excavators have thrown out no hints on these points.

We next come to the tombs which have been studied by M.M. Kastorchis, Kondakis, and Lolling (1878-1880).¹ They lie a little

¹ EUTH. KASTORCHIS, *περὶ τῶν παρὰ τῇ Ναυπλίᾳ παναρχαίων τάφων* (Ἀθῆναιον). EUTH. KASTORCHIS, J. KONDAKIS, and D. PHILIOS, *περὶ τῶν ἐν Ναυπλίᾳ παναρχαίων τάφων καὶ τῶν αὐτόθι ὑπὸ Σπράξωνος μνημονευμένων λαβυρίνθων*. LOLLING, *Ausgrabungen am Palamidi* (*Athenische Mittheilungen*).

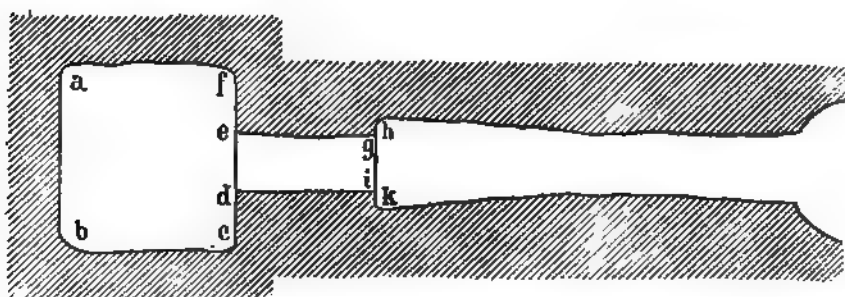
way out of Nauplia, on the north-east declivity of the hill which carries the stronghold of Palamidi, with the houses of the Pronia suburb extending at the base. We read in Strabo that Cyclopæan grottoes and a labyrinth were extant in his day at Nauplia.¹ From the way he speaks of Mycenæ and even Argos, it is evident that he was ignorant or had a very superficial knowledge of the country, and was mainly dependent on former travellers for his information. The words "subterranean graves" and "passages" may have set his imagination working, and made him jump to the conclusion that here was another relic of the Cyclopes, whose achievements he so much admired. The so-called labyrinths are either quarries, which, as at Gortyna, furrow the flank of the neighbouring mountain, or the tombs lately discovered. These are connected with each other by narrow corridors, mostly choked up with fallen and undisturbed earth; hence a complete restoration of the burial-place is out of the question. Nevertheless, the partial clearance permits us to guess a complicated arrangement of chambers, a crossing and re-crossing of galleries vaguely suggestive of a maze, and the inhabitants may have fallen into the habit of so designating to visitors the sombre vaults and passages of the prehistoric necropolis.² Be that as it may, the chambers enclosed by this so-called labyrinth were plundered at an early date. The explorers also came upon undisturbed sepultures whose entrance passage, being hidden under the herbage growing on the mountain slope, effectually saved them from grave-seekers. But these lie some distance apart from each other, and are not comprised in the above group (Figs. 132, 133). In both we find a dromos from four to seven metres long, vertically sunk in the tufa rock to the depth of *cir.* three metres. The width of the vault at the bottom of the pit averages one metre twenty centimetres to one metre sixty centimetres, and is somewhat less at the top, to facilitate the closing.³ The work is slovenly and hastily done; the axis does not pass through the

¹ STRABO: 'Εφεξῆς δὲ τῇ Ναυπλίᾳ τὰ σπήλαια καὶ οἱ ἐν αὐτοῖς οἰκοδομητοὶ λαβύρινθοι· Κυκλώπεια δ' ὀνομάζουσιν. Again, about the Tirynthian walls built by the Cyclopes: καὶ ἴσως τὰ σπήλαια τὰ περὶ τὴν Ναυπλίαν καὶ τὰ ἐν αὐτοῖς ἔργα τούτων ἐπώνυμά ἐστιν.

² 'Αθήναιον.

³ The same contrivance is noticeable in the neighbouring tomb of the Heræum and at Spata.

middle of the chambers, and the walls do not exactly correspond with each other; the angles lack sharpness, and are almost round. The door-frames have no decoration. The ceiling, more or less convex, is irregular like that of a grotto, and has neither the curve of a cupola nor the slope of a house covering.¹ All the entrances are walled up with dry stones. The mean dimensions of the chambers are two metres by three metres at the side, and several



FIGS. 132, 133.—Plan and section of tomb near Nauplia. One-hundredth of actual size.

of the tombs have shallow pits (Figs. 134-137). They have been placed in the primitive period from the fact that bones and broken Mycenaean pottery have been found in them.² Elsewhere potsherds and scrappy objects marked the spot where the body had lain; but because the skeleton has disappeared, we should guard against the inference that no inhumation has taken place here.³ Elsewhere again, the vats contained bones which had

¹ The tomb alluded to above is fully described in the 'Αθήναιον.

² 'Αθήναιον.

³ *Ibid.*

passed through fire;¹ but in this case the hole is of later date, dug when the grave was re-used. Chips from the covering slabs have been found in and about the pits. The peculiarity of the Nauplian graves is their having oven-shaped niches sunk either in the side-wall of the chamber or in that of the passage (Fig. 134). They were found to contain broken pottery and terra-cotta figurines; some were closed by walls made of loose stones, others with great slabs.² One is tempted to view these niches in the

Z

Φ

FIG. 134.—Plan of tomb at Nauplia.

light of additions made to the family vault when this had become quite full. One of the explorers throws out the not improbable suggestion that the niches in the passage were intended to receive the bodies of persons of inferior rank, who were not entitled to have a place marked out for them within the chamber; that we have here the remains of dependants and slaves.³

The grave furniture harmonized with the insignificant dimensions and internal arrangement of graves plainly made for

¹ 'Αθήραια.

² *Ibid.*

³ LOLLING (*Athenische Mittheilungen*).

common people. The number of the objects found in them is not large. Potsherds from vases neither remarkable for size nor workmanship are plentiful; then come small terra-cotta figures, bits of necklets, some gold ornaments, and above all glass paste, shaped into large beads or small squares coloured white or blue. This, although not much, suffices to show that the graves are contemporaneous with those of Spata and Menidi, in Attica. The significance of the Nauplian cemetery was not fully understood until Schliemann's discovery of the shaft-graves at Mycenæ, when comparison of the two groups revealed the fact of the close analogy existing between them, whether architecturally or from the nature of the objects they contain; with this difference, that in regal and wealthy Mycenæ all the

FIG. 135.—Section through E—Z of tomb near Nauplia.

FIG. 136.—Section through H—θ of tomb near Nauplia.

FIG. 137.—Section through Υ—φ of tomb near Nauplia.

graves are ampler, some are more richly decorated, and make a braver show of the precious metals, than could be expected of a small fishing-town such as Nauplia. As the observer stands under the oft-rebuilt walls of Palamidi, accounted as one of the strongest fortresses of Greece in mediæval and modern times, which was taken and retaken more than once, he perceives, here and there, traces of fortifications that creep back to the period of the early graves above described. This is no solitary instance; ancient enclosures and substructures in Cyclopæan or polygonal masonry may be said to everywhere cover the ground of Argolis. Prominent among these is the citadel which in by-gone days was called Larissa, but has now yielded up its old name for the Pelasgic one of Argos. It looks down on the city lying at its base from a height of 300 metres. Remains of the old

circuit-wall are still visible along the outer edge and the sides of the hill; its primitive mode of construction takes us back to the by-gone days when the princes that held sway here were at deadly feud with Mycenæ. Overlooking Port Tolon, south-eastward of Nauplia, very similar walls mark the site of the acropolis of Asinæ, one of the coast-places of the Driopes.¹ Then comes the enclosure of ancient Mideia, lying midway between Tiryns and Mycenæ, now Palæo-Kastro of Dendra, whose area is strewn with broken Mycænic pottery. Finally, there is Epidaurus by the sea, with its massive circuit-wall built of huge irregular blocks, and many walls and towers scattered all over its territory, which one and all mount back to remote ages.² No researches have been made among these ruins of late years, explorers who wished to study the art of fortification as it was practised in this corner of the world in those early days having had their attention turned to the more imposing and better-preserved defences of Mycenæ and Tiryns, towards which, too, they were attracted by the hope of new discoveries. In conclusion, we would recommend to the attention of future observers two monuments that have long been known, and deserve to be studied by the light of recent discoveries; namely, the pyramidal piles with rectangular chambers at Cenchreæ and Ligourio: the former lies on the road leading from Tegea to Argos, and the latter near to Epidaurus.³ Are they tombs or watch-towers, as Curtius is inclined to think? What is their age? The walls, built of colossal stones, with tendency to horizontal courses, have led some to compare these erections with the buildings of Mycenæ; but at Cenchreæ the units are bonded with lime mortar mixed with pounded brick or reddish sand, a fact which suggests a later age. Although there is no trace of such mortar at Ligourio, the impression which Dörpfeld took away with him does not make for a prehistoric period. It would be well to see if, peradventure, the rubbish does not contain scraps of Mycænic pottery.

¹ E. CURTIUS, *History of Greece*.

² *Ibid.*

³ *Expedition in the Morea*; CURTIUS, *History of Greece*.

The Domed-Tombs of Laconia.

The Homeric tales represent Laconia as intimately united with Argolis throughout the heroic period. An Atrid prince, Menelaus, reigns over Laconia; Messenia, as yet unknown by that name, has large dealings with Mycenæ. Nestor, the aged king of sandy Pylos, is the companion and counsellor of Agamemnon before Troy. Telemachus during his journey in search of his father, finds ready welcome along his route, whether from Nestor or Menelaus. These are, of course, poetical fictions which cannot be taken literally; yet higher criticism accepts the main lines of the picture as reminiscences of a time when the whole of Peloponnesus was swayed by one civilization, at least on the coasts turned towards Egypt and Asia, during the golden day of Achæan supremacy over the peninsula.

The scholars who have devoted their time and energies to the finding of monuments which owe their existence to Mycæan culture, were sure to explore, some day or another, such antique sites as Laconia and Messenia, where there might be some chance of coming across traces of the arts and industry of pre-Homeric Greece. In 1887 Schliemann examined the plain of Sparta, notably the crest of the heights skirting the left bank of the river opposite the old town. Attached to the place were the name and worship of Menelaus, and these raised hopes which study of the ground has not confirmed. He found nowhere Cyclopæan walls or mounds, in the depths of which might lurk very archaic graves. Disheartened to find nothing but pottery of the classical age on the surface, he gave up the task as hopeless.¹ M. Tsoundas, on behalf of the Archæological Society, brought to light on the Menelæan heights, hard by the reputed site of Therapnæ, broken Mycæan pottery, but no architectonic relic of any kind.²

In the small plain of Arkinæ, Arkina which is hemmed in on every side of the compass by the spurs of the Taygetus, he discovered a rude, small domed-grave, four metres seventy centimetres in diameter. The objects found in it are of the poorest description: a few stone beads, and one gold ornament;

¹ *Athenische Mittheilungen*.

² TSOUNDAS, "Ἐρευνᾶν ἐν τῇ Λακωνικῇ καὶ ὁ τάφος τοῦ Βασιλείου (Ἐφημερίς ἀρχαιολογική).

this, however, is precisely similar to a piece from the tomb at Menidi.¹ He also came across two other sepulchres, very like those at Nauplia, lying midway between Godena and Mahmoud Bey. All he did was to clear the entrance;² for he had made up his mind to excavate a bee-hived tomb known to exist southward of the hamlet called Vaphio, in the plain of Sparta, which since 1888 has leaped into celebrity (Fig. 138).³

At first the enterprise did not look promising. Not only had the tomb been visited by a number of former travellers, but it was also shockingly mutilated.⁴ The roof, the stone beam, and one of the door-posts had fallen, and were lying on the ground; whilst part of the other jamb was broken off. The roof, it was

FIG. 138. — Map of country round Vaphio.

said, had been cast down during the national war; but it is much more probable that the tomb was plundered in antiquity. The situation of the building must have attracted attention from the very first; for instead of being hidden away in the flank of a hill, it stands on its summit, previously levelled out for the purpose, and rules the country far and near (Fig. 139). The joints about the walls, and the cracks caused by the heavy stone beams, are made good with lime mortar. The diameter of the

¹ 'Εφημερίς. Arkina is not marked in the French official map; but as its situation occurs between Gorani and Arna, and is duly set down in the map, the reader cannot go far wrong in trying to ascertain the site.

² 'Εφημερίς.

³ *Ibid.* The name of Vaphio appears in the regulation map.

⁴ In *Beiträge* (BELGER), and in the 'Εφημερίς, will be found the history of the Vaphian tomb, from Gropius, who first saw it in 1805, down to Conze and Michaëlis, by whom it was visited in 1860.

building, taken at the foot of the wall, averages ten metres fifteen centimetres to ten metres thirty-five centimetres (Figs. 140, 141). It cannot be measured exactly. In the chamber the courses are preserved to the height of *cir.* three metres. There is no trace of a folding-door. The existence of a wall blocking up the passage is inferred from the stones heaped up high before the threshold.

In presence of an edifice in such a poor state, the only hope of finding aught of any interest was to clear the whole place.

FIG. 139.—View of mound carrying the tomb. The Taygetus range seen in the distance.

They began with the entrance passage, and found that the filling was natural earth that had been rammed down about two metres deep. The spade made but small impression on the mass, and, as it contained broken pottery of the same age as the tomb, it was inferred that the passage had been filled after the burial, and had never been re-opened. Towards the end, where the dromos becomes a covered passage, they came upon a very unusual sight. Extending across the whole path, one metre ninety centimetres broad, had been dug a pit; this the explorers found full of unsquared stones that had fallen from the door leading into the chamber, thus proving that the excavation had been empty until these portions of the masonry gave way.

The idea that the hole may have been dug in antiquity has little to commend itself to one's belief. In the first place, thieves who knew what they were about would not have looked for treasures here; in the second place, the cutting has no clearly-defined shape, it is broader at one end than at the other, and it contracts towards the bottom into a mere line. But what clinches the question is the fact that M. Tsoundas found

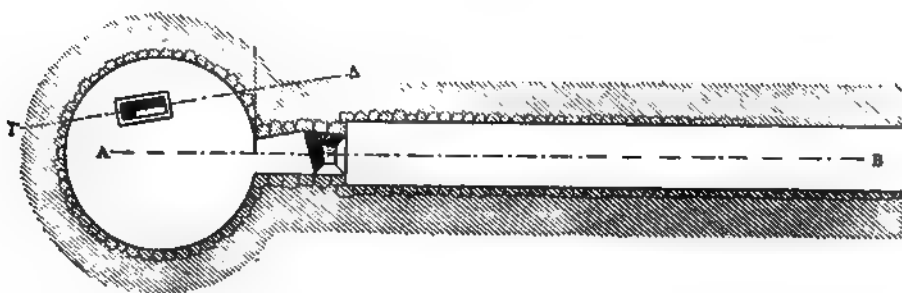


FIG. 140.—Plan of tomb, Vaphio.

the bottom of the excavation covered with a bed of ashes ten centimetres thick, overlaid with a stratum of undisturbed earth. These are sufficient indications that we have here a sacrificial pit, contemporary with the building, in which, on certain days, offerings were cast in honour of the dead, until the final closing of the sepulture. Up to the present no other instance has been found in a domed-grave of a pit-offering in this situation.

FIG. 141.—Plan of tomb, Vaphio.

On the floor of the chamber a grave has been cut, one with the soft limestone. Its length is two metres twenty-five centimetres, one metre ten centimetres broad, and about one metre deep. Thin walls made of slabs horizontally placed one upon the other lean against the sides of the grave; larger slabs form the lid and the bottom. Some of the covering stones have slightly moved, and left tiny fissures through which a little dust

has entered the grave, which otherwise was found intact, and with all the objects deposited there in by-gone days. But, as in many of the rock-excavated graves at Mycenæ, there was no trace, great or small, of the body ; it had been destroyed by the dampness arising from the ground. But the position of the corpse, which seems to have lain on its back, perhaps in a semi-recumbent posture, has been inferred from the place occupied by the funereal objects. The head was higher than the feet ; a novel kind of pillow was made for it by a whole group of bronze weapons and instruments, alabaster vases, silver and clay pieces, lamps, etc. Close upon eighty amethyst beads made up an ample necklace which fell low on the breast, and showed where the neck had been. The place of the wrists is indicated by two small heaps of engraved stones ; near these, *i. e.* within reach of the hands, were golden and silver goblets. The latter are quite plain ; save for fillets in relief running round the body and the upper rim. The former are not only valuable on account of the precious metal of which they are made, but also from their ornamentation—consisting of human and animal figures—the intrinsic merit of which secures to these pieces a place of honour among the productions of the primitive civilization of Greece.

The old town of Amyclæ is mentioned by Pausanias as a place which had preserved its sanctuaries, where people went to admire the throne of Apollo by Bathycles of Magnesia,¹ but that the Dorian invasion had brought it down to a village level. The site of ancient Pharis, however, had long been abandoned. Both cities figure in the catalogue of ships, and would seem to have gathered around them the population settled on the middle course of the Eurotas, until the newly-founded Sparta took their place.² The site of Amyclæ has been recognized close by Godena, where remains of wells, of buildings, and part of an inscription which bears the initial letters of the name of the town, have been discovered.³ An isolated hillock, rising on the river's bank to the height of twenty or thirty metres, commanding the whole plain eastward of Amyclæ, is supposed to cover the ruins of Pharis. Its two summits are ruled to have carried, one the

¹ PAUSANIAS ; STRABO.

² HOMER, *Iliad*.

³ *Rapporto d'un viaggio fatto nella Grecia nel 1860*, by A. CONZE and A. MICHAËLIS (*Annali dell' Istituto di corrispondenza archeologica*, 1861).

tomb, and the higher one, now Palæo-Pyrgos, the acropolis (Fig. 139). Its name—and the site would not have been ill-chosen for a citadel—implies the existence of ancient ramparts; yet the denuded summit of the hill shows no signs of constructions.¹ Pharis disappeared early, and its territory was doubtless given to Amyclæ. The question may now be asked, whether the tomb seen here, which bears so close a resemblance to the domed-graves of Mycenæ and Orchomenos, is not the sepulchre which the Amyclæans showed as that of Cassandra, in honour of whom they had raised a temple and a statue?² The detail is of no great consequence. What is of real importance and self-evident at the same time, is that we are in presence of another sepulture of those Achæan chiefs who before the invasion of northern tribes held sway over hollow Lacedæmon, as Homer has it.

M. Tsoundas has opened quite recently (1890) another tomb; this time on the western side of Taygetus, in sight of the Mycenian Bay. It lies in the demos of Abbia, two hours or so northward of Kardamyle, close to the site of ancient Gerenia.³ It is in a very dilapidated state; the passage, the entrance, and the wall surrounding the chamber, still standing to the height of three metres, are all that remains of it. Its walls are meanly built of irregular stones, the gaping interstices being closed with smaller ones; the only blocks of considerable size are the stone beams over the doorway. The cupola must have been broken open and the vault rifled in antiquity. This excavation has brought but little profit to the explorers. The objects are small and of no value, and must either have been discarded or overlooked by the thieves; they number glass ornaments, gold leaves, a bone comb, beads of marble, engraved stones, and bits of plain pottery. The most interesting items in this find are the statues, representing one a man and the other a woman, twelve centimetres and eight and a half centimetres respectively. Curious details of costume are said to go with these statuettes; no drawing, however, has as yet been published of them.

There are literary evidences, those of Herodotus and Strabo for example, to the effect that in consequence of the descent of Thessalian tribes in Bœotia, Minyans and other sections of

¹ *Ἐφημερίς*.

² PAUSANIAS.

³ *Ἐφημερίς*, 1891.

the population wandered forth and settled on the declivities of Taygetus and the valley of the Eurotas,¹ taking with them city names such as those of Leuctra and Arnæ, together with a type of architecture peculiar to them.² Does not the tomb which Pausanias calls the Treasury of Minyas, the greatest in size after the Treasury of Atreus, still arouse in the mind of the beholder a stupendous notion as to the wealth and power of the Minyans of Orchomenos?

The Domed-Tombs of Attica.—The Acropolis of Athens.

Discoveries never go single-handed. No sooner is an unexpected find heralded from one point of the compass as offering some point of novelty, a type, a phase, or artistic form hitherto unknown, when fresh instances come to explain much that was obscure before, and bridge over chasms that had been accepted as irremediable for all time. The ball, once set rolling, never stops until the goal is reached; confirming once more the dictum that he who seeks will find.

This was emphatically the case with the Mycenaean civilization. The unparalleled treasures yielded by the campaign of 1876 had hardly been ticketed in the Athenian Museum, when a landslip at Spata,³ a hamlet on the road to Marathon, close to and eastward of Athens, uncovered a tomb resembling at all points the graves which Schliemann opened in the capital of the Atridae.

¹ Εφημερίς, 1891.

² HERODOTUS; STRABO. Ottfried Müller has collected and commented on every scrap of evidence to be gleaned from ancient writers relating to the Achæans and the Minyans of Laconia, in his work entitled, *Orchomenos und die Minyer*, ch. xv. The hope he threw out to the effect that fresh and systematic researches carried on at Amyclæ would probably result in discoveries as full of interest as those at Mycenæ, has been realized by the excavations of M. Tsoundas.

³ The first account of the discovery appeared in the *Ἀθήραια*, written by E. A. KOUMANOUDIS and KASTORCHIS, with seven indifferent plates. Milchöfer heralded the find in the *Athenische Mittheilungen*. This was followed by a paper on the collection of antiquities which had just been discovered in Attica and was being formed at Athens, under the title, *Die Gräberfunde in Spata (Athenische de Mittheilungen)*. The most important work is that which appeared in the *Bulletin correspondance hellénique*, 1878, by HAUSSOULLIER, entitled, *Catalogue descriptif des objets découverts à Spata*. The catalogue is accompanied by seven plates in photogravure, representing the more important objects.

(Fig. 142). The chamber was entered through the roof, which has fallen in and filled the vault with earth and rubbish six or seven metres deep. Mixed with the soil and ruin were objects which encouraged the excavators to clear the whole hypogæum, so as to bring to light the internal arrangement. The tomb is approached by an open path, which follows the incline of the

FIG. 142.—Perspective view of entrance to the tombs after the excavations.

hill for a distance of twenty-two metres twenty centimetres, and two metres forty-eight centimetres broad. It abuts on another open and narrower passage, three metres long and one metre five centimetres broad (Fig. 143), leading into the largest of the three chambers which make up the vault (Fig. 144). It measures four metres ninety-five centimetres in height, four metres fifty centimetres in breadth, and six metres in length. The other two are a little lower and smaller. The rock between the first and

second chamber has been rebated; whence it would appear that a door or rather a closing slab had once stood here. The entrance to the first chamber is walled up to within a little of the lintel, with stones laid in mud. In the back chambers alone have human bones been found.

Eastward of this grave, a little farther off, a very similar vault has been excavated; but it has only a single chamber, and nothing to speak of in the way of furniture, both tombs having been looted in antiquity, when the closing slab was removed along

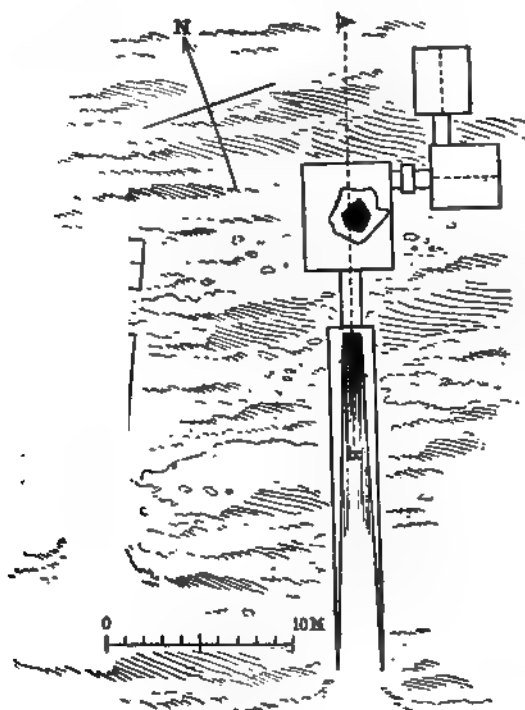


FIG. 143.—Plan of tombs, Spata.

with objects placed there in honour of the dead. Nothing was left except débris, which, though minute, enable us to establish a strong family likeness between these finds and the grave furniture at Mycenæ. It is doubtful, however, if in their pristine condition they could challenge the Mycenaean treasures. From the fact that every item from this grave was found in the outer passage, it is supposed that the thieves halted there that they might divide the spoils. Some of the things were of so diminutive a size as to be easily dropped in the dark as they were passed from

hand to hand, without anybody being the wiser, and their loss has been our great gain. The most curious of these specimens will be dealt with and figured hereafter. For the present we may remark that stone objects, whether arms or implements, are of rare occurrence in this hypogæum, and arrow-heads are almost all in bronze. The vases, none of which can be completely restored, both in shape and decoration recall those from Mycenæ and Ialysos, in the island of Rhodes. On the other hand, from Spata has come quite an abundance of glass and broken ivory. Of the precious metals, gold and bronze, the trove-seekers have left us hardly any pickings. Generally, the decoration is less purely geometrical than that of the shaft-graves on the Mycenaean acropolis. The Spatan ornamentist

FIG. 144.—Section through A B of the principal tomb.

makes a larger use of the organic kingdom than his Mycenaean colleague; he not only derives his patterns from plants and the lower animals, but from great quadrupeds and even the human figure. The Spata tomb was cleared in 1877. Two years later, another grave at Menidi, towards the foot of Mount Parnes, a little way from ancient Acharnes, was uncovered by a second landslip, and excavated by MM. Lolling and the architect Bohn at the expense of the German Institute, M. Stamakis superintending the work for the Greek Government; of which a report, mainly written by Dr. Lolling, has been published.¹ If the arrangement of the tombs at Spata is reminiscent of the bee-hive graves in the lower city of Mycenæ, the Menidi hypogæum is a faithful copy of the domed-building with single chamber; it

¹ *Das Kuppelgrab bei Menidi (Deutschen archæologischen Institute in Athen).*

would therefore be superfluous to give a plan or sections of it.¹ As at Mycenæ, here also the tomb is hollowed out in the flank of a rocky hill; but its mode of construction is much inferior. Blocks dressed with any degree of care only appear in the door-case and the first course, where they served as foundation; the rest of the work consists of unsquared units leaving intervals

FIG. 145.—Door of tomb.

between them, which are made good with small stones. Nevertheless, the main characteristics of the Mycæan style of building are recognizable here, down to the expedient resorted to by the mason for lightening the lintel (Fig. 145). Thus, externally, four stone beams separated by hollows, as in the great Egyptian

¹ *Das Kuppelgrab.*

pyramid, rest on the door-posts, which hold aloft the upper portion of the front wall. Internally we find a triangular cavity, as over every Mycenian entrance; with this difference, that here it was subsequently filled in with smaller stones (Fig. 146), for as the bad masonry had little coherence, the mason was at his wits' end how to close the top of his triangle.

FIG. 146.—View of door of tomb from the chamber.

The dimensions here are less than at Mycenæ and Orchomenos. The passage which gives access to the chamber is three metres wide and twenty-six metres long. Its entrance, as usual, has been walled up with dry stones. In breadth the doorway measures one metre fifty-five centimetres, and three metres thirty centimetres in height, up to the lintel. The diameter of the enclosure is eight metres twenty-five centimetres, and its altitude

from the dome to the ground is reckoned eight metres seventy-four centimetres. The closing slab has not long disappeared, for the older inhabitants vaguely remember seeing it in position. When entire, the height of the building must have been *cir.* nine metres. Blocks lying around the mound are doubtless from a circular wall which served to support the accumulations of imported earth. No trace of applied or painted decoration is seen either in the chamber, or the stone beam, or the door-posts, and the furniture is of the poorest description. The excavators are of opinion that the grave has not been disturbed; yet it contained no precious metals, and the objects collected in it are some few fragments of bronze weapons and ivory pieces, the largest of which are from circular boxes or knife handles. *Per contra*, small glazed squares of terra-cotta, glass necklaces, pieces designed for dress trimmings, and glass buttons are picked up in great profusion. The technique revealed in the broken pottery of this tomb is dependent on that of the later Mycenaean vases. In the passage leading to the chamber, specimens of much later earthenware, and bits of vases with red figures of rigid style, have been collected.

Out of other primitive sepulchres lately reported from many a spot of Attica, two graves, the one at Eleusis and the other at Thoricos, present a constructive detail bearing on the open passage which everywhere fronts the entrance to the now well-known type of the domed-building. What appears in the same situation at Eleusis and Thoricos is a corridor which in small recalls the galleries of the Tirynthian wall. In both the hollow is covered by stones set in advance, the one above the other (Fig. 147). In length the dromos at Eleusis is four metres eighty centimetres, by one metre ninety centimetres broad, and three metres fifty centimetres in height under the drip-stone; whilst the diameter of the circular chamber is eight metres eighty-five centimetres.¹ The construction is very primitive in style; it consists of large blocks almost in the rough, and pebbles shoved in the interstices left by the bigger units.

The tomb at Thoricos lies at the back of a ruinous Greek theatre which is well known to travellers. The outline of the mound, trenchantly relieved against a lower and jagged mass, was noticed some years ago as a probable receptacle for a domed-

¹ F. LENORMANT, *Tombeau pélasgique à Eleusis*.

tomb.¹ Treasure-seekers took upon themselves to prove the correctness of the assumption; for when the Ephor Staïs cleared it in 1890, he discovered that it had been entered from the top.² All he found in it were fragments of bronze weapons, broken Mycenaean pottery, and human bones, which had seemingly been cremated. The construction of this vault is even more slovenly than at Menidi; the plan of the chamber, instead of

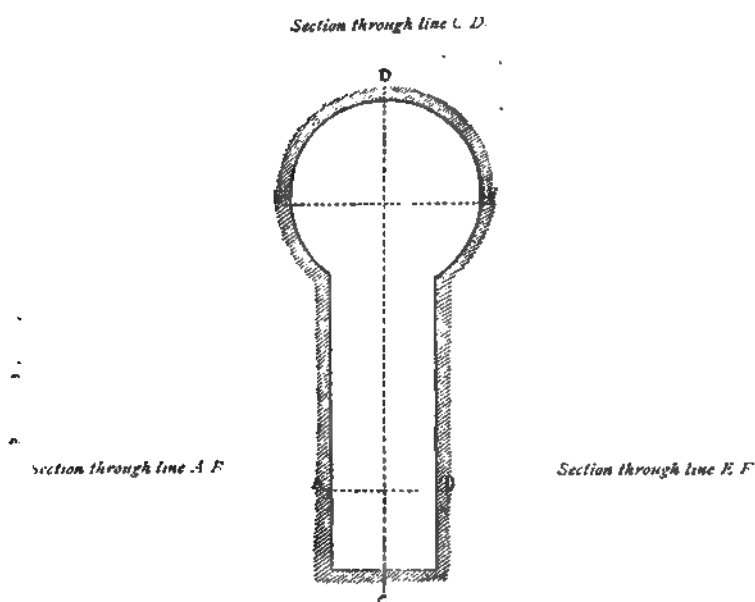


FIG. 147.—Plan and sections of tombs, Eleusis.

being circular, is elliptical in form. As at Eleusis, the passage is partly covered. Another tomb is said to exist a little farther on, at the foot of the mountain, where depressions in the ground are supposed to mark the hollows left by its fallen cupola, whilst the saliences on the hill-side would represent the covering slabs of the dromos.³ Lacking precise indications, Staïs failed to hit

¹ MILCHÖFER, *Berliner phil. Wochenschrift*.

² *Δελτίον αρχαιολογικόν*, 1890.

³ Letter of M. Mayer in *Berliner phil. Wochenschrift*, 1891.

off the grave. The explorers also think they have found vestiges of several sepultures of the same age and style in the vicinity of Vari, where Mycenaean vases have been exhumed and removed to Athens. As to the graves themselves, their explorer, Ephor Philios, in his hurried visit, seems to have been satisfied with ascertaining in a general way that the chambers are approached by long passages cut in the virgin rock.¹

We cannot be surprised that the earliest culture of Greece should have left its mark in this part of Attica; for we must remember what tradition recounted in regard to colonists said to have come from Asia Minor across the islands of the Archipelago, who, under the name of Leleges, Carians, Ionians, or what you will, settled here in remote antiquity.

The tombs we have met up to the present hour on Attic soil are second-class, and belonged to petty local chiefs not overburdened with worldly goods, nor do we see here, on every beetling crag, walls that can in any way be called Cyclopæan. If during the primitive period there were in Attica princes wealthy and influential enough to build them fastnesses resembling the citadels of Argolis, they will be found at Athens, and there only. The men who at that time wielded the sceptre over the plain watered by the Ilissus and Cephissus were domiciled on the rock which was fated to serve as pedestal to numerous architectonic master-pieces, and which without any prefix is called *the* Acropolis. Its natural advantages were precisely similar to those offered by the citadels of Troy and Tiryns. The distance from the foot of the hill to Phalerus is not five kilometres; far enough to feel safe against hostile attempts from the sea and watch the enemy's advance; near enough to enable the populations gathered here to frequent the markets held on the coast by Phœnician traders, who had a factory close by in the island of Salamis. The tribe had, no doubt, many fishermen, for the deep waters of the bay teemed with fish, and salt could be had for the picking; whilst mariners would contribute to its sustenance and wealth. On the other hand, very little was needed to assure the defence of a mighty block some hundred and fifty-seven metres above the level of the sea, and entirely isolated. To the northward it rules the houses of the modern town from an altitude of nine hundred and eighty-five metres; whilst the bottom of the ravine on the

¹ Πρακτικά τῆς ἐν Ἀθήναις ἀρχαιολογικῆς ἐταιρείας, 1881.

opposite side, intervening between it and Museum Hill, is sixty-five metres below the first course of the citadel wall. With the exception of a narrow path from the west, the rocky height offers on all sides vertically precipitous rocks, which defy attempts at an escalade. Cecrops, Erechtheus, and Theseus are successively connected with the primitive epoch of the national history; just as Inachus, Danaüs, Perseus, the Pelopidæ and Atridæ, are bound up with the more varied and richer cycle of Argian tradition. Let the mythical proportion and poetic inventions of later days be ever so large, it remains true that the names of the Attic heroes represent a long series of hereditary princes who, entrenched on this plateau, covered with their protection the homesteads of the low-lying valleys of Ilissus and Cephissus. To have his authority acknowledged by subjects who paid him tribute, and by strangers who might be tempted to invade and harry the country, the position of the king must not only be a strong one, but he must be able to insure a shelter to his people. The existence here of mighty walls was known from ancient records and epigraphic evidence, where allusion is frequently made to an enclosure cast around the Acropolis by the laborious and skilful Pelasgi. Hence the name "Pelasgic," "Pelasgicon," "Pelargicon," prefixed to the wall.¹

We learn from Herodotus that the Pelasgi obtained the land skirting the foot of Hymettus as a reward for "having led a wall around the Acropolis."² Taken by itself, the meaning of this passage might be construed as applying to a defence which, like that of Cimon, and the later Turkish rampart, ran at the outer edge of the plateau, but for Thucydides, who sets us right as to the situation of the Pelasgic circuit. "The wall they call Pelargicon," he writes, "is below the citadel."³ The two prepositions, "around" and "below," used by Herodotus and Thucydides, explain and complete each other: they make it plain that the term "Pelargicon enclosure" was applied to a wall surrounding

¹ The literary information relating to the Pelasgic wall will be found in *Schriftquellen zur Topographie von Athen*, which forms the first part of CURTIUS' fine work, *Die Stadtgeschichte von Athen*, in which the author in his admirable style and easy exposition, wholly unimpaired by old age, has summed up the researches of a long and laborious life entirely devoted to the history of Greece. A careful list of the authorities consulted has been made by A. Milchöfer.

² HERODOTUS: μισθὸν τοῦ τείχεος τοῦ περὶ τὴν ἀκρόπολιν κοτε ἐληλαμένον.

³ THUCYDIDES: τὸ τε Πελαργικὸν καλούμενον, τὸ ὑπὸ τὴν ἀκρόπολιν.

the base of the Acropolis and not the plateau. An interval, spacious enough to afford standing-room for a whole multitude, parted the central portion of the rocky mass from the ring encircling it. This by extension came to be called Pelasgicon as well. It was on this spot that Hippias, in 510 B.C., when pursued by Cleomenes, entrenched himself with his followers, "whence," says Herodotus, "the Lacedemonians could not dislodge him."¹ Again, whilst the Peloponnesian army was laying waste Attica (431 B.C.), the country folk who had hurried to the town got shelter in the Pelasgic enclosure. That it was a free space we gather from an undated Delphian oracle, forbidding the erection of any structure within the Pelasgicon.² The prohibition was doubtless suggested to the Pythia by one or other of the far-seeing statesmen of Athens, who guided her affairs during the first half of the fifth century B.C., Aristides or Themistocles, Cimon or Pericles.

Had houses been staged up the slopes of the hill, once the first enclosure was forced, they would not only have afforded shelter, but admirable defences to a hostile force against the missiles rained down from the citadel; whilst favoured by darkness the invaders could suddenly appear before the upper rampart, and carry it before the garrison was aware of their presence. That the leading men of that day were fully aware of the advantages of providing what in modern parlance would be called a "military zone," is inferred from the fact that they called in divine intervention to support them in this direction. Once only, during the invasion led by Archidamus, was the law sanctioned by religion infringed upon. In those early days, however, no such fears disturbed the inhabitants, who could calmly view the possibility of a siege, in the full consciousness that their defensive means were more than a match against the machines which the attacking party might oppose to them. They trusted, not in vain, in their massive ramparts, and felt at ease. Then, as now, rustic abodes must have covered the lower portion of the hill to the north and north-eastward, where three or four springs bubble up from the rock. Mere threads of water, if you will, but which never dry up.³ With the exercise of a little patience

¹ HERODOTUS.

² THUCYDIDES.

³ The ancient names of these springs will be found in E. CURTIUS, *Die Stadtgeschichte*, &c.

they sufficed for the wants of man and beast; a little of the precious liquid was diverted to the small garden-plots, an olive or two, or a fig tree growing around the hovels; whilst the family goat and sheep would find in the rock crevices a few blades of *parthenion*, which the inhabitants themselves were glad enough to share with the animals, when besieged by Sylla. These habitations were parted by narrow alleys and staircases cut in the rock,¹ and the enclosure was pierced by numerous passages and outlets; hence the name of "Enneapylon,"² by which the wall is sometimes called. These exits led into the adjacent country, where the inhabitants of the circular village tilled the land and pastured their flocks by day, returning at eventide to find shelter behind the ramparts.

What was the trace of the ellipsoidal wall? Did it preserve a uniform level around the hill? It is as yet impossible to say. The only literary evidence on this head tends to prove that, to the westward, the Pelasgic rampart passed near the Areopagus, and the only portion which has been identified is by the Odeon of Herod Atticus.³ Thorough excavations like those lately made within the Acropolis, would alone disclose its whole course; here, however, the work would be much more difficult, because of the rubbish heaped up high towards the foot of the hill, either shot down from the fortress rampart, or arising from the ruins of surrounding houses. The explorations above mentioned have cleared, here and there, a primitive enclosure which is certainly not the Pelasgic fortification alluded to by the historians, since it is found *on* and not *below* the Acropolis, but yet is contemporary with the Pelasgicon, and shows a close analogy to the Tirynthian and Mycenian walls, whose style of construction it reproduces. That it belongs to the primitive period is indubitable (Fig. 148).

The wall in question is built of stone, torn from the upper

¹ PLUTARCH, *Sylla*: τὸ περὶ τὴν ἀκρόπολιν φυόμενον παρθένιον. PLINY, *Hist. Nat.*

² According to some modern writers, the Enneapylon was a kind of advanced work, a redoubt standing on the west of the Acropolis, just before the rise of the hill, up which were staged nine gates. But in no extant primitive fortress has anything like this array of gates set back to front been met with. Furthermore, the testimony of Herodotus does not make for it; whilst the nine entrances are better accounted for by doorways pierced in the circular wall, more than one kilometre long, enclosing the Acropolis.

³ E. CURTIUS, *Die Stadtgeschichte*, &c.

portion of the rocky mass; a coarse limestone pervaded with bluish and red patches, which a bed of marl separates from schistose deposits forming the foundations of the Attic heights. The rampart is composed of almost unsquared stones, smaller than at Tiryns, rougher than at Mycenæ, and bonded with clay mortar (Fig. 149). The antiquity of the stones is unmistakable. West of the Erechtheion appears a very similar wall, covered by a foundation which, to judge from the fine calcareous tufa quarried in the vicinity of Piræus of which it is made—and so much affected by the Athenian builder in the time of Pisistrates—must belong to a later age. Again, the wall of Pericles, visible at the south-east corner of the Propylæa, has had its angle cut away slantwise, in order that it might be pieced on to the Cyclopæan fortification, which at this point is still nearly flush with the cornice of the back wall.¹ The only piece of irregular masonry which was known before the excavations of 1885-1889 was seen on the incline of the rock immediately below the Propylæa (Fig. 148), and is doubtless a relic of the old pathway which, as at Mycenæ, wound up the hill-side towards the Acropolis; for, as stated above, around the plateau scraps of wall crop up on many a point, and, like the rampart built after the Medic wars, encircled the citadel (Fig. 148, 5). The south-east angle is well preserved; but on the western side of the hill the fortification disappears under the mass of the Propylæa, along with the gate which must have stood there. On the southern face, in spite of gaps, the general outline of the enclosure is fairly well maintained; whilst the north and east sides have many a portion to show. Piecing them together, it is seen that the wall followed the natural configuration of the rock and maintained itself, except at the south-east corner, in front of the back enclosure. The latter, thanks to accumulations particularly notable at this point, has very much enlarged the area of the citadel. The plateau at the time of the first excavations had a considerable incline to the southward, and was generally uneven save towards the north. Here, therefore, were found numerous remains of houses built of unsquared blocks laid in mud (Fig. 148, 7). Larger units

¹ Ross, in 1837, pointed out that the piece of wall under discussion belonged to the primitive enclosure which the men of old attributed to the Pelasgi (*Archæologische Aufsätze*).



L. Thullier, del.

Scale. 0 50 100 150 metres.

FIG. 148.—Map of the Acropolis, Athens.

went to the making of the most important erection, whose apartments were ampler than those of the other houses. This may have been the "strong house of Erechtheus," where Pallas Athene betakes herself after having placed Odysseus under the protection of Nausicaa.¹ We have doubtless here the palace of the lords of the castle, and were it better preserved we should, in all likelihood, find it a reduplication of the palaces of Tiryns and Mycenæ (Fig. 148, 3). The only Attic hero known to Homer is Erechtheus; the name of Cecrops is not mentioned,

FIG. 149.—Fragment of Pelasgic wall, from the north-west of the New Museum.

and Theseus appears in lines admittedly interpolated, and in a passage of the *Odyssey* which is comparatively of recent date.

As in other primitive citadels already described, here also are beheld secret passages, staircases built in the thickness of the wall, or in the rocky height leading to narrow posterns and subterranean reservoirs. Such would be the ramp, twenty metres or thereabouts east of the Erechtheion, which enters a split in the rock and comes out at the foot of the escarp, on the north-east side of the hill (Fig. 148, 4). There are still some steps in position towards the summit of the Acropolis, which gave access

¹ *Odyssey*: δῶκε δ' Ἐρεχθίδος πυκινὸν δόμον. Cf. *Iliad*.

to the plateau. In order to assure to the inhabitants of the citadel the enjoyment of and free access to the most available of the sources within reach, a winding staircase of about forty steps has been cut in the vertical wall. It gives access to a chamber likewise excavated in the tufa, and at the end of it we find a circular well or basin into which falls, drop by drop, the water percolating the stony mass. This is no other than the Klepsydra, "hidden water" (Fig. 148, 8), the most important spring in the citadel, and coeval with the wall (Fig. 150). No such passages exist on the south, where the rock is vertically precipitous; yet here the Pelasgi seem to have terraced the ground in order to enlarge



FIG. 150.—Plan of the Klepsydra and of its approaches.

the level. To them also, mayhap, should be attributed the piece of Cyclopæan wall which has been cleared between the southern side of the Parthenon and Cimon's fortification (Fig. 148, 6). The wall under notice is breached by half-a-dozen steps, so as to connect the two esplanades staged there against the rampart (Fig. 151).

From the foregoing description, the reader will have gathered that the castle of Cecrops and Erechtheus was enclosed by a twofold enclosure; built, it may well be, ere the name of Athens, fated to be noised abroad, had come into existence. The arrangement which we find here of two concentric lines of wall, wreathing, one the foot, the other the brow of the hill, is paralleled in many a Turkish stronghold of Asia Minor; in Greece proper,

the Acrocorinth may be cited as another instance. The prince and his kinsmen, the heads of the noblest families, and the men-at-arms who went to battle with them, inhabited the upper level, whilst the masses—huntsmen, labourers, and artisans—were domiciled below, behind the external rampart covering them.

The authority of these local chiefs was not confined to this

FIG. 151.—Sustaining wall and staircase. In the background are seen the substructures of the Parthenon.

compact group; it extended beyond the fortified hamlet to the open villages lying around it. The more important were perched on the jagged ridges of the somewhat lower mass which rises to the south and south-west of the Acropolis. Collectively, the name of Pnix is sometimes applied to these hillocks, the higher of which are occupied, the one by the Philippos Monument, and the other by the Observatory. Their sides are seamed by many ravines,

whose breadth and gentle fall make them the natural roads by which the plain is reached. These hills are turned to the south ; sheltered therefore from northern blasts, but open to the refreshing wind from the sea, which in summer blows cool breezes. Here and there, on these heights, are traces of the ancient buildings of the Pelasgi-Cranæ of Herodotus (Fig. 152).¹ But the majority of the houses have but one room apiece ; the floor, the end wall, and part of those at the sides are cut in the tufa. There are no stones lying about ; hence the built parts, notably

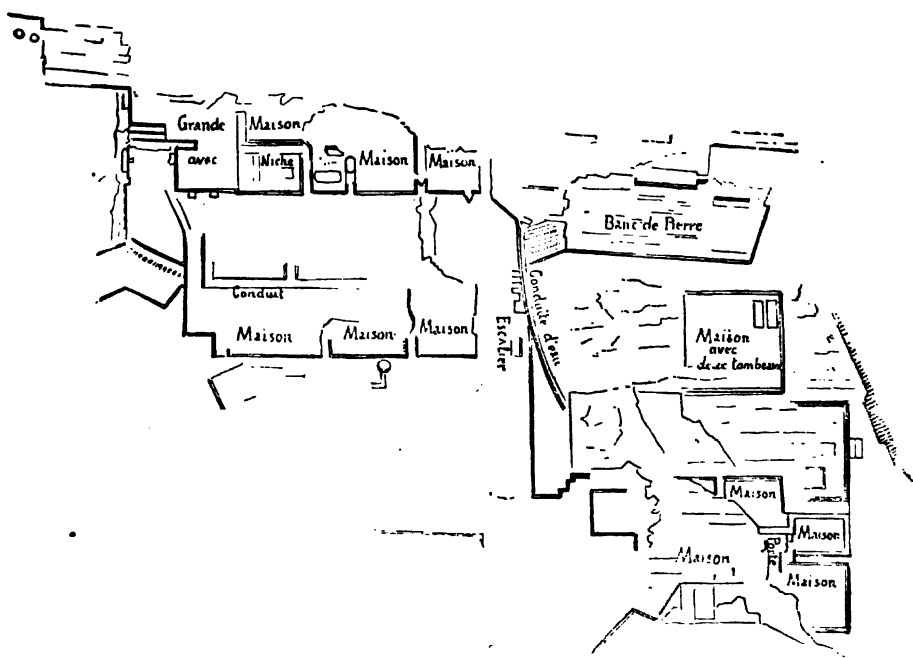


FIG. 152.—Traces left on the rock by primitive houses in the Melite quarter, Athens.

the front, must have been made of crude bricks, for which excellent clay was to be found in the adjacent plain. Manifold cuttings are visible on the rock—here a flight of three or four steps led to the habitation, there seemingly to a first storey, with which some of these houses were provided. Rock-cut, too, were inner recesses serving as cupboards and silos, as well as benches in front of the abode, where the gossips gathered at eventide ; open gutters for draining used water or rain, and presumably graves dug amidst habitations. Sometimes also, an esplanade of some extent was levelled out in front. The ease

¹ HERODOTUS.

with which the stone-cutter fashioned his native soft chalky stone, is even better seen in the sanctuary of Zeus, which the inhabitants of these scattered hamlets jointly raised to the great god of the Pelasgi, whom they also worshipped on the summit of the Pnix. The site, as has been remarked somewhat earlier, was long held as the Athenian Agora. A better-informed criticism, however, has identified the double esplanade extending along the eastern side of the Pnix, between the Observatory and the Monument, as a high-place, a kind of temple open to the sky (Fig. 153), and the religious centre of the surrounding populations. The two esplanades are separated by a ledge of rock which has been vertically cut. In process of time the lower esplanade was enlarged to accommodate the ever-increasing

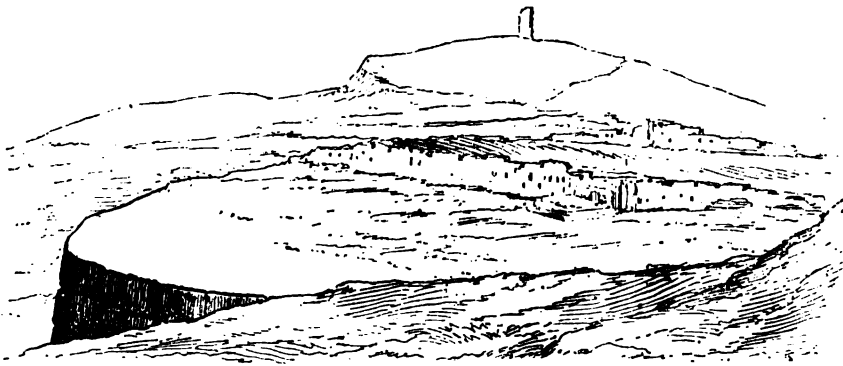
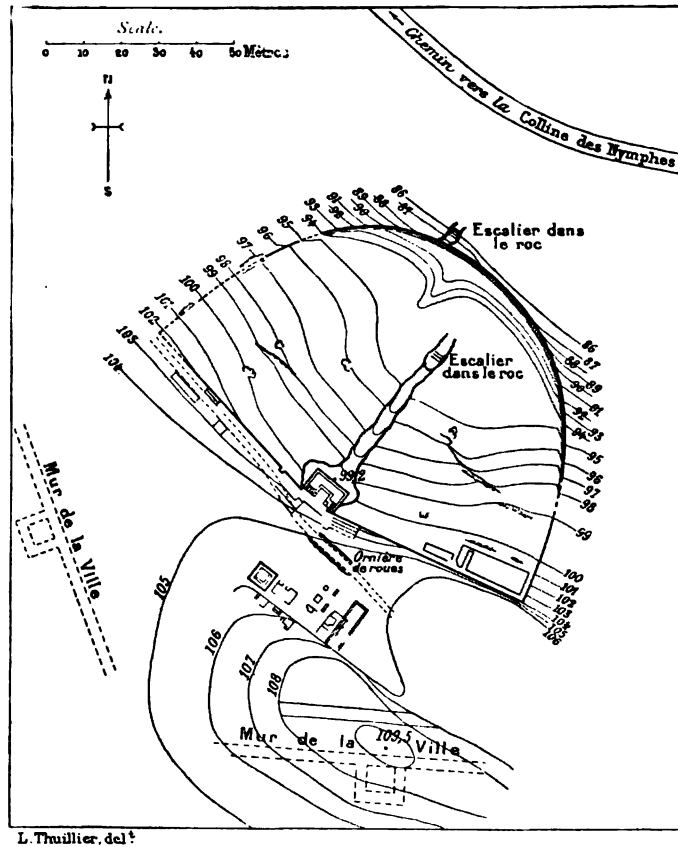


FIG. 153.—View of double esplanade known under the name of Pnix.

numbers that flocked here. The area was levelled out into a semi-circle or thereabouts, and a wall of polygonal stones was built to support the imported earth (Fig. 154). That this sub-structure was a later addition, is inferred from the fact that it has covered the stairs which formerly mounted to the esplanade. Midway between the staircases which connect the twin levels is a landing carried on three steps (Fig. 155). Although the ground-plan of these buildings is simplicity itself, our habits are so far removed from those they imply, as to make a sympathetic restoration a difficult matter. Did the stone block of the lower esplanade constitute the altar towards which converged the paths, one of which still shows chariot-ruts? or, with Curtius, should we rather identify it with the marks seen on the quadrangular block of the upper level? (Fig. 155). In his opinion the stepped landing in

question served as a stand whence the officiating priest proclaimed the successful issue of the sacrifice, and the acceptance by the deity of offerings which the faithful had made.¹

We may safely assume that the Cecropidæ, Erechthidæ, and Egidæ, like other Attic chiefs, had family vaults of their own, wherein, along with them, were buried part of their riches. What was their situation? Was it within or without the Pelasgic



L. Thuillier, del.

FIG. 154.—Plan of double esplanade.

enclosure? Were they pits excavated in the rock, as at Mycenæ, or chambers hewn in the tufa, as at Spata, or bee-hive graves like those at Menidi and Eleusis? We know not; and their having survived to the present time is more than problematical. On the upper level of the Acropolis the rock has everywhere been struck, and Mycenaean pottery has been found in the deep layers of ruin; graves, however, are conspicuous by their absence.

¹ E. CURTIUS, *Die Stadtgeschichte*, &c.

Little is to be expected from the neighbouring heights, in that they have been submitted to a fairly thorough exploration. The defences surrounding the Acropolis, the works executed by an industrious population on the adjacent eminences, the wares collected within many a chamber of primitive sepultures, are evidences that in those early times the inhabitants of Attica were not cut off from the civilization which held sway over the rest of Hellas. If their culture, as represented by the monuments they have left, cannot challenge that of Mycenæ, Tiryns, and Orchomenos, it is because the Attic rulers of that day had not the resources of the Pelopidæ and of the Minyan magnates at their disposal. Cecrops, Erechtheus, and Theseus have no status



FIG. 155.—Showing stone die at the point of intersection between the twin esplanades.

among the great Achæan families which so largely figure in the lays of the Epic bard. Athens is barely mentioned by Homer. Accordingly, it is possible that her potters and goldsmiths were not as skilful as their more favoured brethren, whose princes were served by troops of attendants and a greater reserve of the precious metals. The difference may also be accounted for from the fact that at Athens, the palace, the defensive walls, and the tombs of the first epoch have been covered by the erections of the later and greater city from age to age, when the soil was tumbled about in every direction to make room for the new buildings. In this way the graves have disappeared; and all that remains of ancient constructions are scraps of walls which the late excavations have shown to be intersected again and again by subsequent edifices.

Next to the plain of Attica is that of Eleusis, where an independent community maintained itself throughout the primitive period. The border warfare carried on between the two neighbouring states is remembered in history. Here and there, on the hill of Eleusis, traces of very ancient structures crop up amidst foundations of Hellenic and Roman times. The tomb, recalling at a distance the domed-buildings of Mycenæ (Fig. 147), has already been referred to. Dörpfeld would also place in the first period the corner of a retaining wall, north-eastward of the great Initiatory Hall. The blocks composing it are smaller than those at Mycenæ and Tiryns, but like these they are almost in the rough, and the intervals left between the single units are made good with pebbles and mud. Here and there the method is identical.

The Domed-Tomb at Orchomenos.

In Attica we have met with none but second-class buildings. To find an edifice from which may be guessed the sustained effort of a wealthy and powerful dynasty, we must cross Cithæron and descend into Bœotia. There, on a lofty elongated ridge rising to the left of Cephissus, and overlooking both lake and plain, formerly stood a city, a queen among the other townships of Hellas, the main centre of a great Minyan clan, that hardy race of navigators who had launched the Argo, and joined hands with the Theban Cadmæus in bringing the fat land of Bœotia under cultivation. This was Orchomenos, a town already decadent in the day of Homer, but whose ancient fame lived on in minstrelsy. The Treasury of Minyas, respecting which Pausanias rebukes the Greeks for unduly lauding the edifices of other nations at the cost of their own master-pieces, is even now visited by travellers, and in its palmyest days must have challenged comparison with the finest instances of Mycenaean art. Orchomenos is not the only citadel which the Minyans possessed in this district. On the other side of the lake, at the foot of Mount Ptoon, a rocky mass which, until the late works, had generally its base washed by the flood, carries the ruins known under the name of Palæo-Kastro of

Goulas; a narrow path connects it with the mainland.¹ The aspect of this enclosure recalls that of the Tirynthian and Mycenian walls. The size of the blocks and the thickness of the walls, which sometimes reaches to six and seven metres, are identical. There are no flanking towers; but as the wall follows the irregular outline of the rock, it presents many saliences which add to the strength of the defence. Two gates, seven metres broad, occur, one on the north and the other on the south face. The wall at the northern gate juts out, as at the Lions Gate, to enable the defenders posted on the rampart to protect more effectually the approaches to the castle's entrance. On the summit of the islet appear the substructures of a spacious building, in length some eighty paces by fifteen.² Are not these the remains of the chief's habitation, and would not systematic excavations bring to light an edifice with a ground-plan akin to the palaces of Tiryns and Mycenæ? The question has been asked whether we have not here the first site of Orchomenos. Strabo has a tradition, according to which the Orchomenians were at first domiciled on the banks of Lake Copaïs; but its waters having invaded the land, the inhabitants were obliged to take refuge on the neighbouring heights.³ The assumption is not a very probable one, for the whole breadth of the lake intervenes between Orchomenos and Goulas; the position of the former and the character of its buildings are precisely of the nature that one generally connects with the heroic

¹ The rock in question appears under the name of "Island of Gla" in the French regulation map. Last year (1893) M. de Ridder, a member of the French School at Athens, made some excavations in the north of the island, in the course of which a huge building was exhumed. It consists of two wings, joined at right angles. The first block is directed from east to west, with a slight bend southward; it overtops the fortification wall, at that point two metres thick only; but elsewhere it reaches five metres fifty centimetres. The second division runs, with an eastward curve, in a southerly direction. The length of each block is about sixty metres by ten; and each terminates, west and south respectively, in a tower of immense girth but of no great elevation. The inner details, long passages, vestibules, and halls, thresholds composed of huge moulded slabs, bronze hinges, concrete pavement made of pebbles and lime, down to the construction and height of the existing walls, which preserve unequivocal traces of fire, recall the similar arrangements of the Tirynthian palace. Connecting the palace with the gateway pierced in the south wall were broad causeways. Numerous fragments of coarse pottery prove that the island was long inhabited. A full description of the building in question has appeared in *Bulletin de correspondance hellénique*.

² *Collection des Guides-Joanne. Grèce continentale et îles.*

³ STRABO.

period. Be that as it may, the ruins of Goulas should be narrowly looked into; they doubtless belong to the oldest civilization of Bœotia. The walls of this acropolis, whose style of construction is identical with that of the embankments skirting the borders and stretching across the basin of Lake Copais, were designed to collect the waters of the streams and fountains rippling in the adjacent valleys, which they conducted by walled channels on to the right bank (Fig. 156). The works in question have been sedulously studied by M. Kambanis, secretary to the society

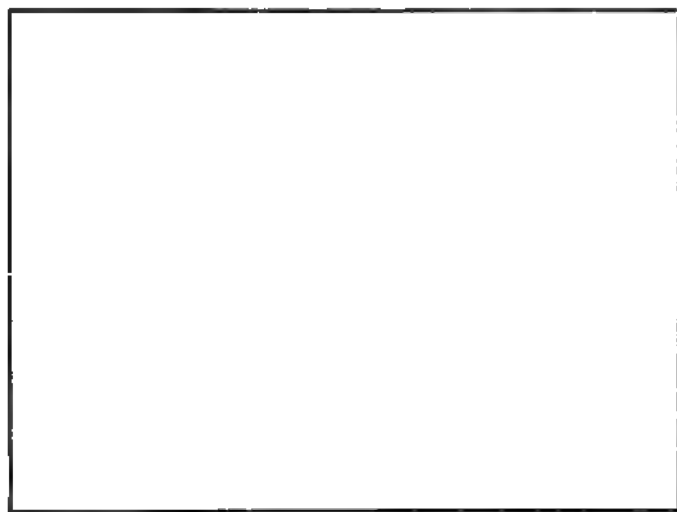
FIG. 156.—Wall of ancient dyke, Lake Copais.

which has undertaken the draining of these morasses;¹ and, judging from the capital style of masonry seen here, as well as from literary evidence, he would attribute these structures to the Minyans.

Orchomenos can boast no walls as old as these; for the town

¹ MICHEL L. KAMBANIS, *Le Dessèchement du lac Copais par les anciens*. Kambanis continues his interesting studies in *Bulletin*, 1893, on the drainage of Lake Copais. In his estimation it embraces two distinct epochs: damming, canalization, and draining off of the waters by keeping the Katavothres carefully open, should be attributed to the Minyans; whilst the second epoch occurs in the day of Alexander the Great, when Crates, surnamed the "Miner" or *μέταλλευτής*, commenced but never finished a subterranean channel which was to have run under the Kephalaria Pass. See also E. CURTIUS, *Die Deichbauten der Minyer*.

has undergone many vicissitudes: it was twice razed to the ground by the Thebans (368 and 348 B.C.), rebuilt by the Macedonians, and seems to have again enjoyed a certain degree of prosperity in Roman times. What remains of the city rampart, strictly so called, appears on the broadest level of Mount Hypantheion, a mere spur of the Akonteion, where it enclosed the public and domestic dwellings. It is older perhaps than the disasters which overtook the town, but its style of building is not Cyclopæan (Fig. 157). As to the walls circling round a species of recess or donjon towards the upper portion of the hill, they



L. Thullier, del.

FIG. 157.—Orchomenos, plan.

date from the fall of Thebes and the victories of the Macedonians. Schliemann's excavations reached the Orchomenos of the Minyans through the deposits formed by the Hellenistic city. The great explorer was irresistibly drawn towards this ancient centre, where he sank trial trenches on three different occasions: in 1880 and 1881, returning in 1886 with Dörpfeld, when his trenches cleared here and there house foundations of the old town. Some of these walls are of unbaked brick, others are built of unsquared stones bonded with clay mortar. This, it will be remembered, is precisely the mode of construction which we have everywhere met in centres coeval with Troy and Mycenæ. Schliemann collected nothing but a monochrome pottery, red, black, or yellow, at the bottom of the pits. But though a little

higher up Mycenaean ceramics are very poorly represented, the building itself, the gem of Orchomenos, belongs to the same school of architecture as the domed-graves of Mycenæ.¹

As at Mycenæ, here also the bee-hive tomb does not stand within the citadel enclosure, but on the slope turned to the Cephissus, northward of the village of Skripu. It is thus described by Pausanias: "The Treasury of Minyas more than holds its own among the beautiful buildings found in Greece or elsewhere; it is circular in shape, with a truncated summit. They say that the topmost stone keeps the whole building together."² Pausanias therefore saw the edifice when it was still in good preservation, and its cupola intact. Its furniture, however, had so long disappeared, that the new generations had forgotten the real purpose of the structure; but they knew it to be very old—connected, too, with one of those glorious ancestors, whom they almost regarded as gods. The place was apparently turned into a kind of chapel, where, it may be, Minyas was offered incense as the founder and tutelary hero of the city.

Schliemann cleared the floor of the chamber and found, amidst layers of ashes and other burnt material—perhaps the result of sacrificial fires made there to the local deity during a long series of years—a great quantity of square marble blocks dressed fair, as well as cornices, which probably belonged to a stylobate for the reception of statues. Close by there was also a table or sarcophagus (Fig. 158).³ These fragments, sculptured and

¹ Schliemann's narratives of the first two campaigns will be found in *Orchomenos*. The result of the excavations of 1886 has been published in a communication to the Anthropological Society, Berlin, June 26, 1886, under the heading, *Ausgrabungen in Orchomenos*, &c., in the *Verhandlungen* of the Society, *Zeitschrift für Ethnologie*. Our Figs. 160, 162-164 are taken from original drawings by Dörpfeld which appear in it.

² PAUSANIAS.

³ We shall not stop to discuss the hypothesis put forward by Schliemann, which Schuchardt has made his own. The description of the Treasury of Minyas by Pausanias, immediately after the word "keystone," is followed by *τάφου δὲ Μινύου τε καὶ Ἡσιόδου*; then Pausanias goes on to say how the bones of Hesiod had been discovered at Naupactus and transported to Orchomenos. According to Schliemann and Schuchardt, we should understand by the above passage that the remains of Hesiod were deposited in the chamber containing those of Minyas. Belger, however, has demonstrated the unsoundness of this assumption: (1) We have no authority for such reading except by forcing the meaning of the text, and adding to the *τάφου δὲ* [*ἐν αὐτῷ*]. (2) But the probabilities are all against the interpolation. The monument in question belongs to the Roman epoch; and the Pythia was par-

otherwise, betray the taste of Macedonian, perhaps even of later times; whilst some of the stones, or rather the letters engraved upon them, belong to the Roman epoch. When the monument

Σ

FIG. 158.—Plan of tomb, Orchomenos. 0 m., 005 : metre.

ticularly active with oracles relating to the transfer of "holy bodies" during the fifth century B.C., with the idea that towns fortunate enough to have in their midst the bodies of heroes such as Orestes, Theseus, and the like, would never be visited by dire calamities. (3) Finally, we read in a life of Hesiod which is attributed to Proclus, that the Orchomenians, obedient to the Pythia's mandate, had buried Hesiod "in the middle of the market-place" (BELGER, *Berliner philologische Wochenschrift*). Our domed-grave, however, far from being in the middle of the market-place, ἐν μέσῃ τῇ ἀγορᾷ, is situate on a hill some little way beyond the boundaries of the old town.

was visited at the beginning of the century, it was found in a

FIG. 159.—Orchomenos. Present state of tomb. Inner view of door of side-chamber.

deplorable state, and the work of destruction has gone on ever since. The cupola has fallen in, and with it the wall above the

lintel; and every slab of the dromos, down to a couple or so, has gone to build the chapel at Skripu. Schliemann found the chamber filled with rubbish and with blocks, some ten metres in thickness; but the walls up to the eighth course, and in two or

FIG. 160.—Inner view of principal door. 0 m., 02 : metre.

three places up to the twelfth, were entire (Fig. 159). They are entirely composed of a dark-greenish calcareous schist, quarried in the vicinity of Lebadeia. The building, like the Treasury of Atreus, consists of a dromos, a domed-chamber, and a much smaller

square room on the right. For obvious reasons, the length of the dromos cannot be measured; but a couple of stones left by the demarch of Skripu proves that the old passage measured in breadth five metres eleven centimetres. The height of the entrance gate is five metres forty-four centimetres, two metres seventy centimetres broad at the bottom, and two metres forty-three centimetres at the top; that is to say, its dimensions are a trifle less than those of its Mycenaean fellow. The lintel, on the other hand, is very much smaller, being only five metres in length (Fig. 160). The diameter of the main chamber is

FIG. 161 —Door of second chamber. View taken from the circular chamber. o m., 02 : metre.

cir. fourteen metres,¹ or fifty centimetres less than in the grave of Atreus. A door, six feet eleven and a half inches high, three feet nine inches broad above, and three feet eleven and a half inches below, leads from the circular chamber into the square room adjoining it (Fig. 161).² Its height is two metres forty

¹ The state in which the monument was then found may be gathered from DODWELL (*Classical Tour*), as well as *Views and Descriptions of Cyclopean and Pelasgic Remains*. He gives an inner view of the building.

² The builder was hardly successful with his circle; thus, the diameter of the circular chamber, measured from north to south, is thirteen metres eighty-four centimetres, and fourteen metres five centimetres from east to west.

centimetres, by three metres seventy-four centimetres long, and two metres seventy-five centimetres wide (Fig. 162). This second vault is particularly interesting from its having preserved its beautiful internal decoration and its walls intact. Had it been excavated some fifteen years earlier, it would have been found practically as it came from the hands of the Minyan builder. Its entrance was blocked by masses of rubbish heaped up high above the lintel, so that, not suspecting its existence, nobody has tried to force an entrance since antiquity. Schlie-

FIG. 162.—Transverse section of side-chamber. 0 m., 02 : metre.

mann was told by the inhabitants of Skripu, that in 1870 the earth had suddenly given way with a great noise, which seemed to come from the interior of the hill. Then was formed a deep hole precisely above the chamber, caused by the ceiling, which had fallen in under the pressure of superincumbent masses of rubbish. The inner construction of the chamber is as follows. Walls of small unprepared stones laid in clay mortar lean against the sides, whilst slabs horizontally placed form the ceiling (Figs. 158, 163). These stones were lying broken on the floor. The

walls were faced by marble slabs, fragments of which are in position. Their decoration, like that of the ceiling, is in genuine Mycenaean style, and will be reproduced further on.

The chisel of the sculptor has not furnished all the elements of the decoration. The holes preserved in the stones tell us plainly that, as at Mycenæ, the gleam of metal played here an all-important part. Thus, on the internal face of the lintel is a row of eight holes, and bits of bronze nails in them (Fig. 160). Around the hole appears a groove, into which was fixed the end of the metal plate. From the fifth hole upwards,

FIG. 163.—Longitudinal section of second chamber and of corridor preceding it.
0 m., 02 = metre.

almost every stone in the domed-chamber has a hole. These holes run round the building in horizontal lines, and are equidistant from each other. The first and third lines are so placed that their holes fall vertically over each other, whilst the holes of the intervening line always fall in the centre of the space formed by every four on the other lines, and the result is a series of lozenge-shaped patterns. The surface of both wall and lintel has been carefully polished to receive the bronze lining. The marks left on the walls by these holes are suggestive of rosettes. Around the doorway of the second chamber ran three rows of holes, but without circular grooves (Fig. 161). The rosettes in

this situation, if rosettes at all, though distinct were smaller and thickly studded, so as to harmonize this section of the building with the wealth of its inner decoration, which was quite as sumptuous as the grave of Atreus. For obvious reasons, comparison between the two treasures cannot be carried to the exterior. So far as the mutilated state of the building will allow us to judge, it differs from the grave of Atreus in that there are no semi-columns at the entrance gate, and the façade has no facing. The mode of closing is unknown; for, as already remarked, the double ground-sill which appears in Schliemann's first account¹ has been recognized by Dörpfeld as belonging to the Roman epoch. The height of the circular chamber cannot be given. To attempt a reconstruction of this superb edifice from such scanty data is out of the question. In Phocis, faint traces only of this early period have been found. Broken Mycenaean pottery is said to have been picked up at Daulis;² and very archaic graves, mere rock-hewn holes, are reported from Anticyra, where, too, fragments of very primitive pottery have been collected.³

Thessaly.

In concert with local tradition, we have attributed the great and quaint sepulchre of Orchomenos to the Minyans. Yet previous to reaching Bœotia, they had made some stay in Southern Thessaly. Here, by the tranquil waters of the Pagasæan Gulf, were learnt their first lessons in navigation, ere they ventured on those distant and adventurous expeditions, whose remembrance is preserved in the *Argonaut* myth. History knows them as the first settlers on that coast. Hence we shall not outstrip the bounds of probability by ascribing to these doughty and thrifty clans the oldest monuments which the district they once inhabited has preserved. The bee-hive tomb at Dimini, about four kilometres west of Volo, first drew the attention of students to that corner of the world. The village near which it stands lies by the sea, at the foot of the lower hills of Pelion, some

¹ SCHLIEMANN.

² FURTWÄNGLER and LOESCHKE.

³ *Athenische Mittheilungen.*

little way from the conjectural site of ancient Iolcos, a Minyan centre, whence Jason, with the heroes accompanying him, according to tradition, had started on his distant voyage. In the day of Strabo, however, the city had long lain in ruins.¹ In the neighbourhood of a low hill called Tumba, terminating in a small plateau, are seen remains of a building known under the name of Laminospito, "haunted house"; where from the broken pottery of genuine Mycenaean style which was found scattered about, Lolling, who visited the place in 1884, rightly inferred that they indicated the existence of an ancient sepulture. It was cleared two years later at the expense of the Greek government by MM. Lolling and Wolters. An account of their work, and of the objects collected in the course of the excavations in the chamber, has since been published.² But as the building is so like the tomb at Menidi that it might almost pass for a replica of it, no ground-plan or section is given by us. Its main divisions are a trifle larger than those of the Menidian chamber: the entrance gate at Dimini is three metres sixty centimetres, and at Menidi three metres thirty centimetres. Again, the diameter of the circular chamber at Tumba measures eight metres fifty centimetres, and its fellow eight metres thirty-five centimetres. Both are extremely ill built. The roof at Dimini has long ago fallen in; but its height must have been nine metres. The circular slab which formerly covered the dome, one metre twelve centimetres in diameter and twelve centimetres in thickness, was discovered amidst the rubbish filling the chamber. This implies an arrangement which is met here for the first time; on the other hand, along the inner face of the stone beam over the doorway, we find the relieving triangular cavity. But the dromos, three metres thirty centimetres broad, owing to the steepness of the hill, is much shorter than at Menidi. The entrances both to the passage and the grave have been walled up with loose stones; but the blockage does not extend quite up to the lintel.

The dromos must have been filled in immediately after the interment. Layers of ashes and other burnt material are probably the result of sacrificial fires. Ashes also cover the floor of the

¹ STRABO.

² *Athenische Mittheilungen*: LOLLING, *Mittheilungen aus Thessalien*: LOLLING and WOLTERS, *Das Kuppelgrab bei Dimini*.

chamber to a depth of five centimetres, and do not appear to be due to cremation rites, for human remains—a well-preserved skull and other bones—which have been found amongst the ashes, bear no trace of the action of fire.¹ Here, too, have been picked up scraps of ornaments, described—for no drawings have been made of them—as bearing a close analogy to the similar objects from Mycenæ, Nauplia, Menidi, and Spata, as well as from Peloponnesus and Central Greece. Gold is very scarce, and the ornaments made of it extremely small; but glass squares, pendants, and buttons abound; stone implements and marble beads, half-a-dozen bone buttons or so, were also discovered. The grave was doubtless rifled in antiquity; what we find are but scraps which, being small, eluded the vigilance of the thieves.

The fragmental pottery is certainly of Mycenaean style, but utterly devoid of interest. On the other side of the gulf, hard by the site of Pagasæ, another hypogæum has been cleared by M. Wolters; this has yielded a whole series of vases, many of which have been sufficiently restored to enable us to recognize in them shapes and forms dear to the Mycenaean potter at his best.² The hill on whose slope the vaults are dotted about, rises sheer from the eastern side of the bay. The chambers are small, almost square, and twelve metres at the side, by one metre fifty centimetres in height; they are built of irregular schistose blocks, and larger slabs of this same stone make up the roof, the door-posts, and the lintel. The door, so far as may be judged, is narrower above than below, and was walled with dry stones. That they were covered over with earth is certain, else they would have been destroyed much sooner, and eased of their furniture, which they retained until lately. From one of these graves—excavated by an inhabitant of Volo—have come nearly all the vases filling the two plates which accompany M. Wolter's paper. It looks as if other discoveries ought to be made in this necropolis. Strewing the ground are schistose blocks and slabs without number, the sole relics of many of these graves; some, however, may still be hidden under the sod. The whole country around shows traces of an industry that goes back to a remote period. Hard by Dimini, at a place called Palæo-Kastro of Seskla, Dr.

¹ *Athenische Mittheilungen*.

² WOLTERS, *Mykenische Vasen aus dem nördlichen Griechenland* (*Athenische Mittheilungen*).

Lolling also picked up chips of pottery whose family likeness to the Mycenaean vases is unmistakable.¹ He would identify the spot with the Ormenion mentioned in the catalogue of ships. On the other hand, the idea, if ever entertained, of connecting the ruinous circular chamber situate between the twin summits of the citadel of Pharsales with a domed-grave, must be abandoned.² It has neither a dromos, nor ever had a cupola: it is no more than an old cistern. The open gutter or channel which brought rain-water to the cistern appears along the rocky height overhanging the reservoir.³

The Islands of the Ægean.

Tradition pointed to Crete as a land above all others where monuments both numerous and stately, belonging to the primitive epoch, might be expected to turn up. Crete was nearer to Egypt, Phœnicia, and Cyprus than Peloponnesus; it lay on the track of maritime expeditions and international traffic. It is easy to see that everything poetry has to tell of Minos is but the remembrance which the Greeks had preserved of warlike princes, whose long dominion over the sea had enabled them to surround themselves in their island home with a luxury and outward show of power which yielded in no respect to the splendour and magnificence of the Pelopidæ on the mainland. They made Cnossus, situated at the foot of Mount Ida—which latter had been the cradle of Zeus, the greatest god of the Hellenic race—in the very heart of the island, their capital; ⁴ a town which one

¹ *Athenische Mittheilungen*.

² The notion of a bee-hive grave was propounded by USSING, *Griechische Reisen und Studien*.

³ *Athenische Mittheilungen*.

⁴ Herodotus and Thucydides are nearly at one with regard to the Thalassocracy of Minos; both represent him as the conqueror of the Carians, whom he deprived of the Cyclades. Aristotle, whose vigorous mind was directed to the study of the past history of Greece, is quite as assertive on this question, and he forcibly points out the geographical advantages possessed by Crete. "The island," he says, "looks as if purposely made for the subjugation of Greece. It enjoys a capital situation, and rules the sea around which nearly all the Greek-speaking people is established. It lies at no great distance from Peloponnesus in one direction, and on the other the promontory of Triopion, opposite to Rhodes, serves to bring it near to Asia. Hence it is that Minos assumed the empire of the ocean, subdued the islands, and established colonies in some of them."

easily pictures to oneself as a second Mycenæ. But we may expect to find on points other than Cnosus traces of Mycæan industry; if our expectations have been frustrated hitherto, it is for want of systematic excavations. Years ago I called Schlie-mann's attention to this virgin soil, which I assured him would prove fully as interesting and bear fruits as precious as those culled on the mainland. He journeyed to Crete; but the fame of his wealth had gone before him; so what with the disturbed state of the country and the absurd demands made by the owners of the soil for compensation, the indefatigable explorer left the place in disgust, and set his face once more towards his beloved Hissarlik.

The most interesting discoveries which of late have been made in the island are due to M. Halbherr, who excavated the site of Gortyna and the Idæan grotto. But as his researches bear upon the late archaic period of Grecian art, they do not enter into our present programme.¹ Chance or sporadic excavations undertaken by local folk enable us to assert that in the depths of the Cretan soil is hidden the legacy of a plastic art which, to judge by the style and taste of the pieces to hand, is not very different from that of continental Greece, notably Argolis.

No burials have as yet been found in the island which may, with any probability, be attributed to those Achæan princes who appear in the Epos under the names of Minos and Idomeneus. Should we be fortunate enough to light upon specimens in fairly good preservation, there will be no difficulty in identifying them; the type to which they belong is too well known for that. Nothing has yet been discovered comparable to the great domed-buildings of Orchomenos and Mycenæ; but what raises our hopes is the fact that every monument that has been cleared betrays a close relationship to Mycæan art, either in the ground-plan or the objects found in the buildings themselves. Some twelve years ago, a farmer, whilst ploughing his field on the hill-side, suddenly uncovered a rock-hewn vault. It lies east of the modern village

¹ *Museo di antichità classica, diretto da D. COMPARETTI; Antichità dell'antro di Zeus Ideo descritte ed illustrate*, by F. HALBHERR and P. ORSI, with big atlas, folio. The influence of Assyria is very marked on many of the bronzes, votive shields, and pateras under discussion; Egyptian designs, however, predominate. As the authors rightly observe, we have here imitations from the Phœnician art of the eighth or seventh century B.C.

of Anoja Messaretica, in the ancient territory of Gortyna (Fig. 164).¹ The chamber, which is oven-shaped, was originally four metres fifty centimetres in height (Fig. 165), and is approached by a low passage four or five metres in length, in which you have to crawl on all fours. The grave contained four small terra-cotta sarcophagi, in which, presumably, children had been laid, for the biggest are below one metre in length. The first notion which comes to the mind in presence of these recipients, is that the bodies they contain were cremated; but the holes at the bottom of the vat could only have been designed to drain off viscuous

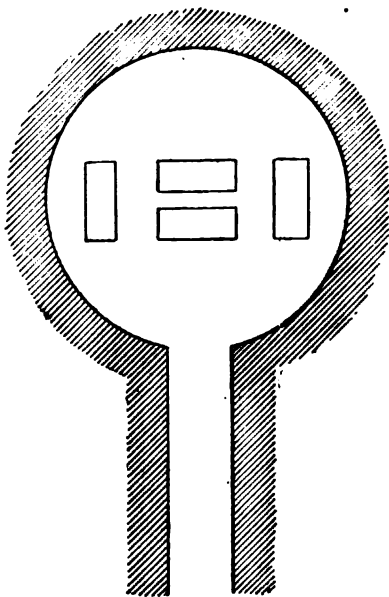


FIG. 164.—Plan of the Massara tomb.

and liquid matter arising from bodies in process of decomposition. The question whether inhumation or cremation was practised here must remain unanswered, for no satisfactory conclusion can be reached from the information gleaned from the farmer, to the effect that the bones were found almost reduced to powder.

The chamber, with its entrance passage and rock-excavated dome covered with earth, reproduces the arrangement of the bee-hive tombs of the lower city at Mycenæ, where they are but reduced copies of the royal sepulchres. Here the parent-shape

¹ PAOLO ORSI, *Urne funebri cretesi dipinte nello stile di Micene* (Estratto dai *Monumenti antichi* pubblicati per cura della R. Accademia dei Lincei).

is not found side by side, as in the Argolic town; but it may be confidently asserted that this same pattern was in the mind's eye of the builder. The arrangement upon which he fixed his choice was not suggested to him by the material to hand; for it had been far simpler and quicker to hollow a rectangular chamber in the rocky flank of the mountain, after the fashion of his own habitation. Examination of the make and decoration

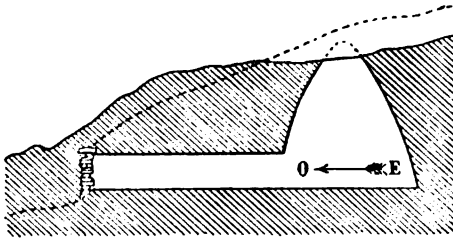


FIG. 165.—Longitudinal section of the Massara tomb.

of the sarcophagi, and the style of the pottery found in this grave, some pieces of which are faithful copies of those from Mycenæ, will complete the demonstration (Figs. 166, 167). In the same period should be placed another sepulture, which the plough accidentally uncovered on the northern coast of the island, near Miletos, now Milato. The chamber is oven-shaped,

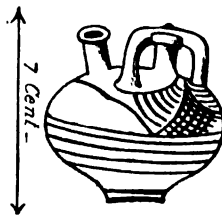


FIG. 166.—Jug found in the tomb.

rock-hewn, and characterless, barely reaching two metres thirty centimetres in length by two metres in breadth (Fig. 168). The pottery found in it permits us to set it side by side with the Anoja grave. In shape, the two sarcophagi seen in this sepulture recall our bath-tubs, and one is decorated on both faces with designs dear to the Mycenaean ceramist (Fig. 169). Finally, a casket, very similar to that of Fig. 167, has come from a vault situated near the hamlet of Pendamodi, in the district of Malevisi,

respecting whose internal arrangement no satisfactory information has reached M. Halbherr. The museum at Heraclion, the chief centre of Crete, contains vases from various spots of the island which are classable in the primitive period; but we are utterly in the dark as to the necropoles in which they have been collected.¹ Nor has search been made for very ancient defences, whether towers or walls, on the sites of the most ancient cities, which from lofty ridges and cliffs look down upon the sea washing

FIG. 167.—Funerary vat of terra-cotta.

their base; such as Phalasarna, Polyrrenia, and Eleuthera, or the ruins scattered over the valley of the Vliethias leading to the White Mountains, in the province of Selino, where remains of fastnesses without number frown upon the traveller as he toils up towards the heights. The most important go by the name

¹ The account published by M. J. Chatzidaki, the founder of this collection which is in process of being formed, is very meagre and unsatisfactory in regard to the localities where the necropoles are situated. It is entitled, *Κατάλογος τῶν ἐν Μουσείῳ τοῦ φιλεκπαιδευτικοῦ συλλόγου Ἡρακλείου ἀρχαιοτήτων*, Heraclion. Two other collections are being formed at Hierapetra and Retymo.

of Temenia, and their very archaic character is unmistakable. Nowhere could I perceive the smallest scrap of cornice or frontel, capital or regular course; no point, in fact, to remind one of Hellenic culture. The walls throughout are constructed in Cyclopæan or polygonal style, and follow the outer edge of the plateau above the escarp. Here and there the defence has been strengthened by towers, made of blocks sometimes two metres long. The area is strewn with smaller stones from ruinous houses similarly built. The conclusion forced upon the mind by the sight of this fastness, is that it was erected by the first settlers who came to this part of the island; whilst the absence of any sign or token of classic times clearly points to its having been abandoned at a very early date.¹ About an hour beyond Temenia are the ruins of Elyros, a Dorian town, once full of great and

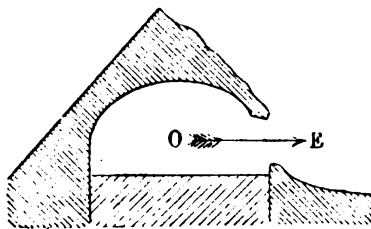


FIG. 168.—Tomb at Milato.

stately buildings. Had Temenia been in existence in the golden day of Elyros, it could not have helped being influenced by the culture of the latter, and its name, which no geographer or inscription has handed down to us, would have been duly chronicled. It is self-evident, therefore, that in those days it had already passed out of men's memory. Were plans, and above all excavations, made here, they would perhaps enable us to creep back to the Eteocretæ, who are supposed to have preceded the Achæans and Dorians in the island. In this way some notion of their social status, their industry and their rustic but massive style of architecture, might be gained. For the rest, if we are to

¹ A rather circumstantial description of this field of ruins, from the pen of my travelling companion, Thenon, has appeared in the *Revue archéologique: Forteresses de la vallée du Vliithias et ruines de Temenia*; but no drawings are given, nor is the style of the masonry defined with precision. Thenon cites a curious passage of Theophrastus relating to the centres in question, from which it would appear that in his day the sites of these dead cities were already shown to travellers and commented upon.

gauge the level reached by this early civilization in the great Achæan centres, it is not on these forbidding heights, beaten by every wind of heaven, that we must look for it, but rather on the site of cities erected on or near the sea ; such as Kydonia, Gortyna, and Cnosus, with the command, too, of the best lands of the country. The town of Kydonia, now *Χάνια*, Canea, has been so often razed to the ground that, although it has always been rebuilt and never ceased to be a bustling little place, it has preserved no vestige of its pristine existence. The site of Gortyna is now occupied by a mere straggling village, called Haghios-Deka ; but under the Roman dominion it became the



FIG. 169.—Funerary vat of terra-cotta.

residence of a pro-consul, when its population rapidly increased : its old stones, it is to be feared, were then re-used for the construction of new buildings. Cnosus, on the contrary, was and remained in a state of decadence throughout the Roman period. When, in mediæval times, Candia rose on the site of Heraclion,—which had been the ancient harbour of Cnosus,—the builders of the new city found an abundance of material to their hand in the apparent portions of the deserted erections, and had no need to uncover or disturb the old foundations. For reasons adverted to above, the constructions in question must have been important. “In the middle of the deep,” says Homer, “rises a smiling and fertile land, the island of Crete, inhabited by so many men that no one can count them ; they live in ninety cities, and speak many

languages. There are the Achæans and the high-souled Eteocretæ, the Dorians with waving crests, and the Kydonians, as well as the divine Pelasgians. The most important city is Cnosus, where Minos ruled for nine years; Minos, the friend of great Zeus."¹

In 1878, Minos Kalokærinós, a merchant of Heraclion, cleared, on the site of Cnosus, the foundations of a building which, to judge from the masonry and the pottery collected there, seems to belong to high antiquity. It stands on the side of a hill which rises to the westward of a streamlet called Makritochos, ancient Kæratos, and which with its valley formerly fenced in Cnosus on the west.² The summit of the mound has been rounded and levelled out. The east and south sides fall precipitously down to the stream forty metres or thereabouts below; the gradual rise of the northern and western sides merges into the lower mass of the plateau upon which the town was built. On the summit of this insulated height trenches were sunk, and two metres below the ground they met walls striking out in every direction. At the time, no one thought of these fragmental walls in reference

¹ HOMER, *Odyssey*. There has been found at Præsos, in the district ruled to have been inhabited by the Eteocretæ, a fragmental inscription which has defied all attempt at decipherment. The letters are derived from the Phœnician alphabet, and the shape of some of them is very near their Semitic prototypes. Comparesetti, who has examined the text, declares that it has nothing to do with Greek. In that case Homer was right when he said, ἄλλη δ' ἄλλων γλῶσσα μεμυγμένη.

² The modern name of the locality is τοῦ τσελεβή ἡ κεφαλα, "the head of the lord." These excavations have been briefly adverted to by Haussoullier in the *Bulletin de correspondance hellénique*. The paper, however, is mainly concerned with the pottery which was collected in the course of the excavations. On the other hand, the aspect and arrangement of this ruinous building are very well described in a letter published by the Archæological Institute of America, in the Appendix of the *Second Annual Report of the Executive Committee*, 1880-1881, written by Stillmann, then American consul at Canea. He is the first who has made drawings of the place, and our Figs. 172 and 174 are taken from him. With strange wrong-headedness, against which he ought to have put him on his guard, by his mistake in regard to Schliemann's discoveries at Mycenæ and Tiryns, he persists in identifying these partition-walls with the fabulous Labyrinth. Fabricius did not visit the sites explored by Kalokærinós until 1886, *e. g.* when the trenches were already half filled up; but the excavations at Tiryns and Mycenæ helped him to grasp what he saw before him. The far-reaching importance of this discovery is gathered from his narrative, *Alterthümer auf Kreta, IV., Funde der mykenaischen Epoche in Knossos*. Schliemann and Dörpfeld also visited the site of Cnosus in 1886, and the remains of the building were recognized by them as "prehistoric." But they were not minded to continue the work.

to one another; but M. Fabricius, eight years later, had no difficulty in identifying them as parts of a unique building or block of buildings. The edifice is apparently rectangular, more than fifty-five metres long and forty-three metres broad. One of the small sides faces north. Two pieces of the massive wall enclosing it have been laid bare; the one at the north-east corner, and the other on the western face. It rested on a well-jointed plinth of tufa, above which the wall was continued with rubble laid in mud; the stone core, however, was cased in large slabs of limestone, averaging one metre in height and

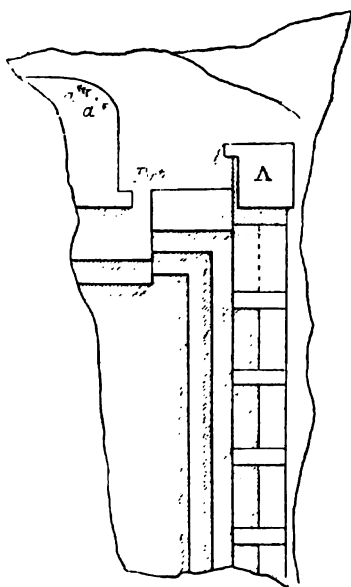


FIG. 170.—Knossos. Plan of part of building.

two metres in length. Towards the north-east corner stood a gate, recessed two metres eighty centimetres; the difference was made good by a well-rounded tower or wall which covered the right side. The opening is one metre thirty centimetres wide (Fig. 170).

As far as can be made out, the inner details of the construction are the following: the area within the enclosure was intersected by partitions also made of rubble and mud; the corners alone being constructed with huge blocks of limestone, which played the part of antæ (Fig. 170, Δ). Traces of the stuccoed decoration which covered the inner walls have been found on the floor of

the chambers. Thorough excavations are needed to bring out the real character of the building. Even as it is, putting together the lofty situation of the building, the thickness of the walls, and the extent of ground it covers, we may safely infer that we have here a private abode of considerable importance; one is even tempted to juxtapose it with the Mycenaean and Tirynthian palaces. For although the thickness of the enclosing wall cannot be measured with precision, there is enough to show that it was one of great strength, akin to the rampart of Tiryns; and, as at Mycenæ and Tiryns, the inner walls have been stuccoed and painted to hide

FIG. 171.—Pithos found at Chosus.

the coarseness of the building material. Finally, here as there a layer of lime concrete has been spread over the floor of the chambers. We now pass on to the points of divergence: here are no cross-beams embedded between stone and brick, or set up by way of antæ at the heads of the wall; the masonry throughout is of solid stone (Fig. 170, A). The reason for this preference may reside in the fact that stone of fine quality could be quarried from the hill adjoining the city, hardly more than one mile distant.

Then, too, the style of the pottery, numbering some twelve huge *πίθοι*, jars, several of them still half filled with cereals, is another proof of the great antiquity of the building. Their peculiarly short handles, and the spirals decorating them, irresistibly

bring to mind the pithoi from Troy and Tiryns (Fig. 171). Their sole evidence, however, would be insufficient to date the building with which they are associated, for they belong to a class of wares whose shape and decoration were repeated with hardly a change from age to age. More certain data is supplied by vases of smaller dimensions, whose potting and decoration, however, have been better attended to; not a few are entire, others in a fragmental condition; but all are instinct with the characteristics peculiar to genuine Mycenaean pottery. Nor is this all. M. Stillmann was the first to notice and copy scratchings on several stones still in position (Fig. 172). Many of these are undoubtedly trade-marks; but two at least bear a striking resemblance to signs of the Cypriote alphabet, and those that have come from the burnt city of Troy.¹ Our indications relating to these signs daily increase, and tend to prove that this system was current over

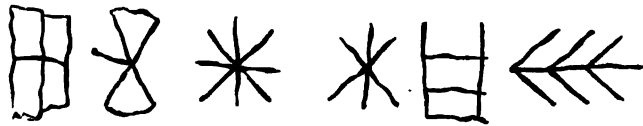


FIG. 172.—Cnosus. Trade-marks.

every coast-line of the Ægean, ere it was superseded—except in Cyprus, where it was retained—by the Phœnician script.² Should the resemblance between the two sets of signs turn out to be something more than purely accidental, it would furnish additional evidence as to the correspondence which forms the subject-matter of our discussion. If we have dealt at some length with the excavation made at Cnosus, it is because it has cleared a building of great size, and to all appearance contemporary with the Cretan Thalassocracy. Since the timid spade of a dilettante has achieved so much, what might not be done by a well-organized and exhaustive exploration of the soil? Meanwhile, we had hoped that the French School at Athens would have assumed the responsibility of an undertaking that promises so well;³ for with scarcely any expenditure of labour, the island has

¹ *History of Art*.

² The place where these incised lines occur is indicated by the letter *a* in Fig. 170.

³ M. Homolle, in 1891-1892, sent M. Joubin, a member of the School, on an exploration journey in Crete; but the exorbitant demands of the landowners

already furnished antiquities of unquestionable Mycenaean style. Among the vases, painted or otherwise, which are deposited in the Heraklion Museum and private collections of the island, a certain proportion is certainly derived from the oldest earthenware ever manufactured by Greek-speaking peoples. From Crete, too, have come engraved stones, some of which are very distinct and quaint. They are the oldest representatives of glyptic art in Greece, and on their first appearance were designated as island-stones.

What has been found in Crete we may hope to find in the island of Rhodes. Its situation at the entrance of the Archipelago is very similar to that of the sister island; it shuts in the Ægean on the south-east, as Crete bars and covers it on the south. Its lofty summits are visible on the one hand as far as the Sporades, and on the other the snowy peaks of Cretan Ida. Such of the Sporades as lie furthest away from Rhodes are in touch with the island-groups of the Cyclades, and thus form a continuous causeway on to Peloponnesus. Homer numbers the Rhodians among those who have followed the grand-sons of Pelops to Troy. "They bring nine ships, manned by warriors from Lindos, 'Ialysos,' and 'Camiros,' whose white houses shine in the sun. Tlepolemos, son of Heracles, leads them."¹ Towards the fifth century B.C. these three townships dwindled into mere hamlets, because the majority of the inhabitants united in founding the city of Rhodes, which soon rose to great power and wealth. From their new centre they continued to rule the island subjected by them; the sanctuaries were preserved, and the ritual with which were bound up the local memories of a dim past went on there as before. With regard to the monuments which M. Salzmänn has brought out in vast numbers at Camiros, they all belong to a later development of this civilization.

The oldest of the three townships in question seems to have been Ialysos, which Homer, in accordance with Ionian pronunciation, spells Ielysos. Its necropolis has yielded objects of markedly great antiquity, and apparently coeval with the furniture of the

and the disturbed state of the country put an end to the negotiations which had been set on foot. He brought back, however, a good catalogue of the vases in Mycenaean style preserved in the public and private collections of the island, along with photographs of the main types; from these we shall freely borrow.

¹ HOMER, *Iliad*.

Argolic and Attic graves. The results of the excavations carried on at Ialysos by A. Biliotti, the British consul at Rhodes, between 1868 and 1870, have naturally found their way to the British Museum. The objects at the time of their discovery were deemed unclassable, and accordingly relegated to the basement. The significance of these pieces was not understood until the opening of the shaft-graves at Mycenæ. Sir C. Newton, with his usual sagacity, at once perceived the resemblance between the two sets of funereal furniture.¹ By his care the Ialysos finds were immediately set in a case where the student can examine them. His views regarding them were accepted and enlarged upon by the vast majority of archæologists interested in the Mycæan question.² But until the publication of MM. Furtwängler's and Loeschke's great work on Mycæan pottery (1886), in which is reproduced whatever is of special interest in the Biliotti collection, the public had very few pieces for comparison, Lenormant and Dumont having contented themselves with the figuration of two or three specimens. No less than eleven plates of Furtwängler's and Loeschke's atlas are filled with the vases in question; whilst stone implements and weapons, glass, whorls, swords, arrow-heads of bronze, and engraved stones make up five supplementary plates. These are accompanied with explanatory notes from Biliotti's journal; we thus get for the first time precise information of the situation and arrangement of the graves.³ Unfortunately, Biliotti made no plan or section of the Ialysos vaults; hence our notion upon these points are more or less conjectural.

The citadel of Ialysos was planted on the narrow plateau crowning a height with precipitous sides, now called Phileremos.

¹ In *Essays on Art and Archaeology* will be found a reprint of the article just referred to, reproduced from the *Edinburgh Review*, entitled, "Dr. Schliemann's Discoveries at Mycenæ." At a meeting of the Society of Antiquaries in 1877, he also pointed out the import of the discoveries in question.

[The pottery we are considering was from the first placed in the case which it still occupies. It was known to be old from the gems found with it, which Sir Charles had acquired for the Museum. Although Mr. Murray, then assistant-keeper, showed them to everybody who visited the Museum, especially Germans, not one cared to express an opinion about these strange pieces.—TRANS.]

² It will be enough to recall the names of Milchöfer, Helbig, F. Lenormant, and Dumont. The latter devotes the whole of the third chapter of his great work, *Céramiques de la Grèce propre*, to Ialysos.

³ *Mykenische Vasen*.

The necropolises of the town lying at the foot of the hill are found in rocky masses stretching away east and west of the Acropolis.¹ The graves which Biliotti opened here at the expense of the Trustees of the British Museum are forty-two in number. They are rock-excavated, rectangular in form, and as near the Nauplia and Spata examples as it is possible to conceive. The passage leading to them, instead of having a gentle incline as in the tombs of Greece proper, is made up of steps or rock-cuttings like those of the Phœnician, Syrian, and Sardinian tombs.² These stairs are sometimes one metre sixty-eight centimetres broad, and, in plan, one of the chambers measures three metres sixty-six centimetres in width, by four metres twenty-seven centimetres in length. The mode of closing is not adverted to, nor is mention made of the situation and quantity of bones which must have strewn the floor of the chambers. Loeschke was unable to detect any trace of fire on the vases.

Although the pottery is by no means as rude and archaic as that of the lower strata at Hissarlik, it all belongs to a primitive and unique period. Ornaments and vases, therefore, stamped with the sign-manual of Greece—or of Phœnicia—are entirely absent here, though so largely represented at Camiros. The terra-cotta pieces are as like as peas from one tomb to another; and their close analogy to the broken pottery which has come from the graves of the lower city of Mycenæ is most remarkable. Hence we are led to infer that the two points, in time, which separate the older from the later bodies deposited in these pits are not far apart. The chambers are seemingly undisturbed. Appearances of displacement which, according to Biliotti, crop up here and there, may be explained by the fact that they are family vaults: the late-comers disarranged the old tenants somewhat. Vestiges of the primitive epoch, though rare among the rich finds brought out of the burial-places of Camiros by Salzmann, are not wholly unrepresented in that district.³ Thus certain vases found by Biliotti, in the village of Kalvarda, not far from Camiros, are

¹ With regard to the situation of Ialysos, see Ross, *Reisen auf den griechischen Inseln*, and his map of Rhodes at the end of the volume.

² *History of Art*.

³ *Mykenische Vasen*. We have inadvertently (*History of Art in Phœnicia*) attributed to Camiros glass pieces which by rights belong to Ialysos. The mistake was brought about by my notes on Ialysos having got mixed with the Camiros set.

certainly derived from the Mycenaean school of ceramics. They are preserved for the most part in the Berlin Museum. All we know about them is that they came from vaults of considerable size, excavated in the rock. Trenches opened here would perhaps disclose a necropolis coeval with that of Ialysos.

Cyprus lies much farther away than Rhodes from European Hellas. Homer does not enroll Cypriote chiefs among the vanquishers of Troy; but he describes them as having friendly relations with the Pelopids, and he knows that Aphrodite, whom he calls Cypris, is the great goddess of the island.¹ The tales of the cyclic poets are to the effect that the island was colonized by the Greeks immediately after the sack of Troy. The fundamental truth of these recitals has been corroborated by linguistic and archæological researches. The peculiarities found in the Greek dialect of Cyprus are irrefragable witnesses to its great antiquity. The excavations which have been made in the island during the last twenty years have revealed to us the existence of a population domiciled here long before the Phœnicians had set their foot in Cyprus; a population which would seem to have had large dealings with the inhabitants of Hissarlik.² Were these primitive settlers one of the many tribes that swarmed all over the western coasts of the Ægean, and which in time became the Hellenes? We know not; but what induces the belief of a common parentage is the fact that the Greeks who came to get a place in the island, almost on the threshold of history, do not appear to have met with opposition on the part of the natives, or to have had enemies to fight, save the Phœnicians. Then, too, throughout the historical period, the island had but two languages: Phœnician and a Greek dialect belonging to the Æolian group. It would, then, be surprising indeed had no instances come to light of an industry which for many centuries scattered its productions broadcast along the shores of the Ægean, and even carried them to distant Egypt. At first, the pieces of genuine Mycenaean style found in the island³ passed unperceived among the countless vases that were brought out of Cypriote cemeteries; but whilst scholars were trying hard to sort them, additional knowledge came to their aid, brought about by Schliemann's discoveries at Mycenæ and Tiryns. These enabled them to

¹ *Iliad*.

² DÜMLER, *Älteste Nekropolen auf Cypern*.

³ *Mykenische Vasen*.

rightly classify and define the specimens in question. According to M. Ohnefalsch Richter, whose extensive explorations in Cyprus are well known, vases of Mycenaean style have more particularly come from a triad of cemeteries: the first is found at Haghia Paraskevi, by the gates of Nicosia, the second at Phœnikies, midway between Dali and Nicosia, and the third at Alambra, southward of Dali. In these necropolises, the graves and the shafts by which they are entered are mostly rock-cut. As a rule they have but one chamber, which, to judge from the quantity of human remains, has been used again and again. The shape of the vault is frequently very irregular, and recalls a natural grotto. As at Nauplia, on either side of the entrance are niches, sunk in the wall, in which funereal offerings of mediocre importance have been placed. Side by side with these vases are bronze weapons, which are of so rare occurrence in other necropolises; whorls with linear decorations, like those at Hissarlik; perforated beads of terra-cotta, and idols similar to the clay figures of the Argolic graves, as well as stone implements. The attention of future explorers should be directed to distinguish home-made from imported wares. The former, as the only products which we may expect to find in the oldest graves, would represent the labour of folk who practised on their own account an industry then current over the whole eastern basin of the Mediterranean, and who thus had a share in the movement of what has been termed "Ægean culture." On the other hand, wares met with in later graves should be attributed to Argolic workshops, or local imitations of them. It would be well also to study from this same stand-point every vestige, however slight, of very archaic buildings, which the investigator may chance to come across on the Cypriote soil; so as to ascertain whether certain peculiarities in the details of the construction, arrangement, and decoration, which characterize the architectonic labours of this primitive civilization from the shores of the Hellespont to the Argolic Gulf, are also traceable in Cyprus. The island is very near to Syria; we shall not be surprised, therefore, if some day or another fragments of Mycenaean vases should come out of graves situated on the Phœnician coast.¹ Loeschke and Furt-

¹ In the Guimet Museum is preserved a vase of genuine Mycenaean fabrication, said to have come from a Sidonian necropolis. It belongs to the class which the Germans call "Bügelkanne" (see above, Fig. 166). [A fragmentary vase, in genuine

wängler told us, as far back as 1886, that Egypt has supplied our collections with pottery of apparently Mycenaean fabrication.¹ They are also inclined to attribute the same origin to some vases which appear in the wall-paintings of Egyptian tombs. Within this decade our knowledge has been greatly increased by the researches of Prof. Flinders Petrie, in Lower Egypt. We shall reproduce, by and by, several fine Mycenaean specimens picked up there. The presence of such pieces in the Delta or Syria is accounted for by commercial intercourse, and does not in any way point to Achæan supremacy over those countries. The case is somewhat different as regards Asia Minor. In our possession is a very curious vase, said to have come from Pitane, in Æolis. Now, in our opinion, the whole of that coast was held in very early times by tribes closely related to the clans whence the Hellenes of history emerged. What is there to prevent Oriental Greeks having advanced breast to breast with their brethren of the West? Why should their industry have been inspired by a different spirit, or marked with a different taste? The fact that many fragments of Mycenaean pottery have been picked up among the ruins of the burnt city of Hissarlik tends to confirm the hypothesis that common methods and tendencies prevailed on the two sides of the Ægean. The buildings in which they have been found are contemporary with the vases in question. Is it not likely that, were diligent search made, we should come across other constructions and pottery of the same kind, along that portion of the Asiatic coast which is comprised between the entrance of the Hellespont and the headlands facing Rhodes? Not until this inquiry has become an accomplished fact will it be possible to say how far afield in this direction Mycenaean culture really extends. Here, for example, is the tumulus of Tantalus, and the cluster of smaller ones surrounding it on the Iamanlar-Dagh, northward of Smyrna.² When they were excavated, nobody had an inkling of the interest attached

Mycenaean style, has been brought out of one of the lower strata at Tell-el-Hazy. The clay is coarse and imperfectly baked; the decoration consists of intersecting bands covered with parallel and cross-hatchings. Boldly outlined in the central division is a large bird. The antiquity is dated by its discoverer, M. Bliss, from 1500-1000 B.C. The mound of Tell-el-Hazy is held by some to cover the site of ancient Lachis.—TRANS.]

¹ *Mykenische Vasen*, pp. 31-32, 82.

² *History of Art*.

to potsherds found among the ruins of a building, and of the conclusions deducible from them. By subjecting the necropolis of Sipylus to the test which has been applied to the similar monuments of the Troad and European Greece, we might perhaps be able to determine whether the Smyrnian necropoles are older or younger than their fellows of Argolis, with which they have often been compared.

It is regrettable that no attempt has yet been made to explore a tumulus situate in the island of Cymæ, some ten minutes east of the acropolis of the old town, and seen by Ross in 1845. It is locally called τὸ Τρόπαιον, "the trophy," from the supposition that it owes its erection to Astyochos, the Lacedæmonian admiral, who wished to commemorate his victory over the Athenians.¹ As already stated, however, this is no mere pedestal hastily run up, but good solid work of stone and mortar, implying months of hard labour. "It is," says Ross, "or rather was, I believe, an imposing tumulus, resting on a plinth base (λίθων κρηπὶς), of two courses of enormous blocks, and of three courses on the south face. The substructure, whose height varies according to the inequalities of the ground, is still from three to seven feet in height. Of the tumulus itself, the core, formed of rubble and clay mortar, alone remains. As to the earth with which the top (τὸ χῶμα) was covered, the hand of man, wind, and rain have played havoc with it. Yet it does not look as if it had been opened. The diameter of this remarkable tomb is nearly sixty feet, and its circuit may be estimated at 200 feet."² Our illustration (Fig. 173), from a drawing by Salzmann, gives a good notion of the situation of the monument, and of its style of masonry.³ The enclosure circling the base recalls the Mycænic walls, whilst the central mass is practically identical with that of the tumuli of Sipylus. Do these stones cover a subterranean chamber? If so, why should it not be whole? It is tantalizing to be reduced to mere suppositions.⁴

¹ THUCYDIDES.

² ROSS, *Reisen auf den griechischen Inseln*, and, with view and plan, in *Archæologische Aufsätze*.

³ M. Fröhner, in whose possession are Salzmann's drawings, has kindly allowed us to borrow our Fig. 173.

⁴ MM. Couve and Ardaillon, of the French School at Athens, re-visited the tumulus in June 1892, and found it precisely as described by Ross. They estimate its diameter at nineteen metres forty centimetres, and its circumference at sixty metres. They noticed that a trial trench has been sunk, but without any result.

The researches of MM. Dümmler and Theodore Bent, in Amorgos and Antiparos respectively, tend to prove that the population of these islands has greatly diminished since antiquity.¹ The tombs which they have opened are simplicity itself; they are dotted about on spots once inhabited but now desert. In them were found vases and personal ornaments, instruments and weapons. The tombs in question, apparently the common sepulture of all these islands, are no more than holes dug in the ground. Their sides have a marble or limestone facing; the



FIG. 173.—The tumulus at Cymre.

¹ F. DÜMMLER, *Reste vorgriechischer Bevölkerung auf den Cycladen*; BENT, *Researches among the Cyclades* (*Journal of Hellenic Studies*). Very similar tombs to that of Amorgos have been discovered in the neighbouring island of Keros (U. KOHLER, *Prehistorisches von den griechischen Inseln*, in *Athenische Mittheilungen*). Dümmler has shown that we should place in this same category a necropolis examined in 1861 at Syra by G. Pappadopoulo, which contains over a thousand graves. It lies close by the Panaghia Chalandrini (*Revue archéologique*). Although the explorer describes very accurately the objects which he collected in the course of the excavations, he fails to grasp their real significance, for he ascribes them to exiles sent to Gyaros and the adjacent islands in Roman times. Ross, as far back as 1845, called attention to the prehistoric necropoles of the Cyclades, and suggested at the same time that they might be due to the Carians, who are described by Thucydides as settled at Delos. He based his assumption on the fact that shapeless, flat marble idols, marble cups, and knives of obsidian are found in them. According to Ross, the islands in which these objects were collected are Rhœnea, Paros, Naxos, the Eremonisian group southward of Naxos, Ios, Amorgos, Thera, and Therasia (*Archæologische Aufsätze*).

horizontal roof and floor are formed by stouter slabs. The lid has been weighted by huge stones to prevent displacement, and overlaid with a thin stratum of earth; their situation is indicated by broken pottery strewn round about. In plan, these graves form a square of *cir.* one metre at the side, and half a metre deep. The bones collected here have almost dwindled to nothing, but there are no traces of either ashes or fire. Owing to the length of these vaults, or rather the want of it, the dead cannot have lain full length, but must have had a recumbent or sitting posture, the upper part of the body bent forward.

The funereal furniture is found partly in the pit itself, partly above the lid. The dimensions and arrangement of the sepulchres situated at Oliaros and Melos, a division of the cemetery of Philacopi, are practically identical. Another section in this same necropolis shows small vaults excavated in masses of perpendicular rocks. They have no entrance passage; the hollow of the chamber, about a cubic metre, is entered by a rectangular door. Some of the graves are somewhat larger, and one is actually found with two chambers of nearly two metres in height. It was rifled, they say, during the War of Independence, and relieved of its bronze weapons, its gold and painted vases, with representations of human figures interspersed with birds. Was this a chieftain's tomb, and a fellow, in time, of the Mycenaean shaft-graves? Who shall say? What admits of no doubt is that almost all the graves of these islands are characterized by rude small vaults, a species of rectangular shaft dug in the ground, or a small chamber cut in the rock, and that all have yielded very similar objects; consisting, now of very common pottery, recalling the earthenware of Hissarlik, now of pieces upon which more care has been bestowed, some of which are decorated in Mycenaean style. Next come stone vases without number, with horizontal or vertical holes for suspension, silver ornaments, idols of marble, arrow and dagger heads, but no swords. The objects themselves evince considerable advance from one tomb to another. One and all are the relics of an industry whose separate pieces offer enough variety to enable us to affirm that its season of activity covered a long series of years, yet sufficiently alike to admit of our attributing them to a single people. In the Cyclades, as in Cyprus, we guess a civilization as yet very rudimentary, whose beginnings are inti-

mately allied to the first settlement, whether of Hissarlik, Tiryns, or the villages buried under volcanic ejections at Thera ; whilst pieces of later date show their dependence on Mycenaean culture in no unmistakable language. What was the nation which practised this industry, what people was it which, during its long supremacy over these islands, sowed everywhere its bones and the marks of its busy life ? To the question only a conjectural answer can be given, for the artisans who fashioned these vases and weapons, being ignorant of letters, could not sign their works ; but if a hypothesis may be hazarded on this head, it will come best at the end, when the whole array of monuments shall have been compared the one with the other.

CHAPTER IV.

GENERAL CHARACTERISTICS OF MYCENIAN ARCHITECTURE.

Building Materials.

OUR wanderings up and down the pleasant shores of the Ægean and the isles dotted on its vast bosom, where the monuments which form the subject-matter of this study are unevenly distributed, are now ended. The time has come to pursue our investigations on another plan; we must try to define, for the whole period about which we are busy, the methods and style of the architect, the painter, and the sculptor—all the artificers who, in some way or another, helped in fashioning the materials to their hand, and impressing upon them the shapes which they had previously thought out, in order that they might administer to the manifold needs of man and please the eye as well. As already remarked, the close analysis to which we shall subject the most evanescent remains of this industry, will put us in a position to offer some restorations, designed, as heretofore, to bring home to the reader the aspect and distinctive peculiarities of one of those units wherein is summed up, at a particular time in the existence of a nation, the effort of its plastic genius.

The building materials used by the primitive builder are stone, wood, and clay. Stone was found in great abundance in the Troad, in Bœotia, and Argolis. Every height bounding the horizon of the latter country has its sides covered with stone masses, out of which the Tirynthian and Mycenan walls were built. There, too, were erected those monuments, at once imposing by their mass, their dimensions, and their elaborate

decoration. Hard calcareous banks are separated from beds of soft limestone, which easily decompose under the action of atmospheric agents. Accordingly, here and there "vents" will occur, and where this takes place towards the surface, the superincumbent mass breaks into great boulders which lie on the ground. Relics torn from deposits laid in horizontal zones, these masses present faces as smooth as if polished by the tool. Many can be used without any artificial help, and the rest with hardly any dressing at all. The builder's preference for Cyclopæan construction is accounted for as that which involved the least expenditure of labour. All he had to do was to raise and pile the blocks upon one another, using for the purpose ropes, levers, and strong arms. For the common portion of the rampart he could dispense with trained artisans; the work was of a nature requiring no skill, and could be done by press-gangs of serfs and slaves. We have an instance of this in the wall of Mideia, whose aspect is even more uncouth than that of Tiryns (Fig. 176), where stones are heaped upon one another in a confused, haphazard sort of fashion, exactly as they came from the quarry.

In the Troad, the calcareous bank does not present itself in quite the same condition as in Argolis; the stone texture is less firm and looser; nor does it appear in great masses on the surface, ready to be fixed. Under the action of the weather, it crumbles away and easily splits; but the hammer has no great work to do in cutting it into units of mediocre or small size. Hence it is that the early inhabitants of the Troad almost entirely built with small materials; they reserved their limestone for rare occasions, such as the corners of their walls and thresholds. Similarly the Hellenes, whether in Laconia or Argolis, Attica or Bœotia, employed rubble instead of heavy, unwieldy blocks, when there was no need to impart to their constructions that indestructible character of solidity, owing to which the circuit-walls of the oldest citadels have been preserved to this day. They had, close at hand, stone in plenty, which they cut into squares of medium size. Thus, a little way out of Charvati, are excavations open to the sky, whence the Mycenians quarried a large proportion of the material with which they built their private and public edifices.

The common native stone did very well for the body of the



FIG. 174.—Midea. Wall of acropolis.

building; but they were not content with this alone, notably in Argolis, where the art of this period produced its masterpieces. Hence, to obtain here greater resistance against the elements and other causes, there harmonies or contrasts of tones which should please the eye, the architect fetched from the outside harder or more deeply-coloured materials than his own limestone. Breccia and sandstone furnished bases of antæ, sills, and steps, whilst alabaster gave dados and friezes, shafts and columns, for the great halls. The façades of the bee-hive tombs were decorated by a kind of mosaic, formed of white, red, green, and grey marbles, which served to bring out the saliences of the mouldings. Trachytes and porphyries further accentuated the effect of these enrichments.¹

These ornamental materials are only found in the better class of buildings, princely habitations and royal tombs. Speaking generally, the constructive principle of this period appears to have been the superimposition of sun-dried brick² on stone; the latter alone came in contact with the damp ground and formed everywhere a base of varying height; whilst the upper part of the wall consisted of clay squares, with a large admixture of chopped straw. The clay is frequently of bad quality and imperfectly sifted; thus at Troy and Tiryns it is found with broken pottery, coarse gravel, and shells. The Mycenaean age knew of neither burnt brick nor tile. Appearances as of kiln-burnt bricks and of lime mortar,³ whether at Troy or Tiryns, were due to a conflagration which destroyed their palaces.

Of the large place held by timber at Mycenæ, and in these

¹ The sandstone quarry referred to above was discovered by Tsoundas a few miles out of Mycenæ, on the road to Nemæa. Although alabaster and other ornamental stones are adverted to by ancient writers, it is in such a vague sort of fashion as to leave us completely in the dark. Should we view them in the light of volcanic stones imported from the peninsula of Methana? We cannot say; nor do we answer for the correctness of the terms we have employed. It would be well to have the question sifted by a specialist. G. R. Lepsius defines the various kinds of limestone used at Tiryns and Mycenæ (*Griechische Marmorstudien*), but is reticent on the nature of the ornamental stones which make up the facings. M. Ardaillon, a member of the French School at Athens, informs me that the slabs from the external casing of the Treasury of Atreus appear to be red or green basalt, probably quarried from Methana or Melos.

² On the composition of these unbaked bricks, their size, the position they occupy, and the changes they have undergone, see DÖRPFELD, *Tiryns*.

³ SCHLIEMANN, *Tiryns*.

two centres, we have already spoken. It supplied the heads of the walls in either town,¹ the wainscoting of passages leading to the citadel of Hissarlik,² the facing of the sides of the main vestibule and bath-room at Tiryns,³ as well as doors and posts, lintels, ground-sills, the floors of upper chambers,⁴ the columns supporting the ceilings of porticoes and public rooms,⁵ including the roof framing, which bore aloft heavy terraces. Finally, one of the distinctive characteristics of the Mycenaean style of construction is seen in the fixing of cross-timbers as ties to the stone and brick courses of the wall, to keep them in their place

FIG. 175.—Northern wall of megaron of the palace.

(see Fig. 175).⁶ When we reflect how extensively timber entered into the construction of these buildings, we cease to wonder at their having all perished by fire.

The heights that skirt the Scamander, the Idæan masses high and low, are finely timbered with oak and pine. But with regard to Greece one is somewhat puzzled as to the origin of the enormous quantity of wood seen in the structures, since it would be hard to find hills more naked and bare than the

¹ *History of Art.*

² *Ibid.*

³ *Ibid.*

⁴ SCHLIEMANN, *Tiryns*.

⁵ ὀξύς, μέλιτος ὀξύς, *Odyssey*, SCHLIEMANN, *Tiryns*.

⁶ *History of Art.*

mountain range which fences in the Argolic plain at every point of the compass. At the present day we should have to go to Arcadia to find vertical and cross beams of the dimensions that must have been used in the great halls of Tiryns and Mycenæ; but in that distant past the Argolic heights had doubtless not yet been deprived of their forests by man's stupidity and the gnawing tooth of animals. The Hellenes of the classic age, and above all Plato, already deplore the alarming progress of this denudation; the latter, in a curious passage of *Critias*, declares that Attica is not so well furnished as it was in former times, when their ancestors had found it clothed with many plants and trees.¹

Walls composed of rubble, unbaked brick, and wood could not be easily worked up to an even surface or made weather-proof: a casing of some sort became absolutely necessary. Now quicklime furnishes the best of linings, and chalk can be obtained from all the calcareous conglomerates and cretaceous deposits which constitute the mountain system of Argolis, by subjecting the stone to the action of fire. This they had learnt to do at an early date throughout the region which we have traversed. The prehistoric buildings of Thera, like those of the burnt city of Troy, are overlaid with a coat of clay;² but the walls, the flights of steps, and floors of the principal rooms of the palace, whether at Tiryns or Mycenæ, are all cemented, sometimes several layers deep. Lime, then, was a regular article of fabrication, and one is not a little surprised to find that masons who made so liberal a use of it should have been so slow in discovering that, if mixed with sand, it would make the best mortar in the world. The only bonding material is mud, pure and simple, or mixed with a little hay and chopped straw, to infuse into it a little more consistency and cohesion.

The primitive builder, unlike his modern *confrère*, was timid in handling metal, and made a sparing use of it in his buildings, where it never appears as supports or frame-work: he set it apart to line, complete, and set off his shapes. His choice was not the result of inexperience, since we find him, at Tiryns, Mycenæ, and Orchomenos, not only in full possession of the resources which his successor will marshal out in the

¹ PLATO.

² FOUQUÉ, *Santorin et ses éruptions*; SCHLIEMANN, *Ilios*.

consciousness of his power, but with a great command of the precious metals, gold and silver. These he draws out with the hammer into almost invisible threads, or flattens them into laminæ of such fineness as to espouse all the hollows and saliences of the ornament. Bronze is sufficiently common to furnish linings which, in places, cover surfaces of considerable extent ; either beaten into thin plates on the anvil, to be cut presently in long strips, or worked up with the hammer into all the ornamental forms then known to the ornamentist. Out of it, too, came nails and cramps which served to fasten metal plates to the walls. Lead was utilized to solder and mend domestic utensils;¹ and from the fact that it can be smelted at a low temperature, it may also have been used in the building generally to join the parts. * Iron has not been traced at Tiryns, Mycenæ, or Troy. The ivory found in the burnt city of Hissarlik and Mycenæ, the coloured glass picked up at Tiryns and in the former town, were imported from too great distances to have played a considerable part in the decoration of the building.² Nevertheless, the Mycenaean architect was not badly off with regard to the productions of his own soil, or those which he obtained through his dealings with the stranger ; be it to constitute the body of his buildings, or to adorn the visible parts of the same.

Mode of Construction.

What most struck the Hellenes of the classic age was the size of the blocks composing the walls of Mycenæ and Tiryns, which they erroneously attributed to the Cyclopes. The mistake was not rectified until Schliemann's discoveries. He showed that the stones at Tiryns were not, as was long commonly supposed, wholly undressed ; that several of them had been roughly worked on their external face with the pick, and nearly all,

¹ SCHLIEMANN, *Tiryns*.

² SCHLIEMANN, *Ilios*. Ivory needles and pins were apparently found in the ruins of the first village. [A small glass vase was picked up in one of the women's tombs at Mycenæ.—TRANS.]

whether prepared or unprepared, whether great or small, were bonded with clay mortar.¹

Megalithism, or the employment of blocks of colossal dimensions, is only found exceptionally in this architecture; in each case its presence is explained by the special destination of the structure, or the part it had to play in this or that section of the unit. The distinctive peculiarities of the architecture we are considering are, above all, (1) the use of clay mortar as sole binding material, (2) stone bases with superimposed walls of crude brick, and (3) timber-ties to keep in place the courses of the masonry. That a country where stone, good clay, and woods of excellent building quality should have begun to construct in this fashion is but natural. If these methods led the way, it is because they were suggested by the nature of the indigenous materials, methods to which time, in that region, has hardly brought any changes. If, in remote districts, the artisan, though still faithful to the old processes which he has received from his forefathers, slowly awakes to the advantages to be derived from the improvements that are taking place around him, such opportunities were denied to antiquity and the middle ages; nay, even to modern times. The industrial advance of the ancient Hellenes lagged far behind their glorious artistic progress. The dissolution of the Roman empire brought in its wake centuries of distress and misery to all the countries once subjected to its rule. In Greece, under the harsh government of the Turkoman, many districts relapsed into a state verging on barbarism. To have survived in such conditions as these argues well for the stupendous vitality of the Hellenic race. On the other hand, cut off from the stir and movement of the world, how was it possible to learn new ways, or improve on ancient methods? The rustic hut, therefore, as far as the structure of its walls is concerned, is precisely what it was in the prehistoric houses of Thera. During my recent visit at Tiryns and Mycenæ, I amused myself in comparing the masonry of the hovels of the adjacent villages, which I found to be identical with the so-called Cyclopæan buildings of the Mycenian acropolis: like these

¹ The excavations of 1886 gave Dörpfeld the opportunity of examining great masses that had long lain hidden under mountains of rubbish, and he thus writes: "The constructor used clay mortar in all the walls without exception, whether boundary walls or inner partitions" (*Tiryns*).

they are constructed with stones obtained by cleavage and laid in mud.

Whether at Argos or the surrounding villages, apart from a few

FIG. 176.—View of street at Es-Isneh.

new houses which belong to the well-to-do, those of the common people or of a certain date are made of sun-dried brick, white-washed and provided with a stone base and a flat roof. Garden

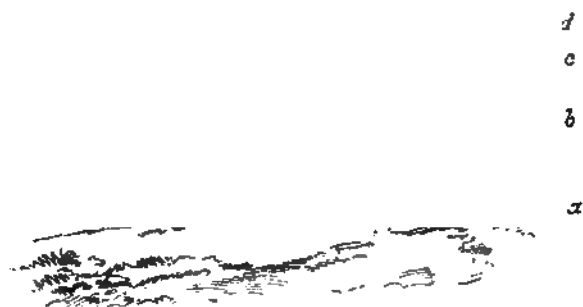


FIG. 177.—Garden-wall at Edremit. *a*, natural ground; *b*, rubble wall; *c*, brick wall; *d*, wood logs of coping.

fences of brick are not protected by any facing. The walls of these villages show no timber ties, but their employment is universal at Nauplia and in the Troad. As an instance, we figure above a street view of Es-Isneh after Virchow (Fig. 176). The timber-

case of a doorway pierced in the rubble wall, and the wood beams laid against the wall at irregular intervals, are well seen. Our next engraving (Fig. 177) represents a garden fence at Edremit (ancient Adramyttion), which still more resembles the walls at Hissarlik. It consists of a stone base below, and above it a course of timber-ties, on which rests the upper part of the wall, which is entirely made of dessicated brick; its coping is protected by a row of wood logs horizontally placed, a practice which must go back to remote antiquity. In all these examples the ties are parallel to the wall; but Babin saw a house in process of construction at Magnesia of Sipylus, where the timber beams cross each other at right angles, precisely as at Troy (Fig. 178). This house has a foundation of rubble, and a door pierced in its

FIG. 178.—Magnaesia. House in process of construction.

front. If above this we put a mud wall—which is sure to have followed—we shall obtain a style of building which is imaged forth in Durm's restoration of the Trojan wall (Fig. 181). The prepossessions that governed the constructor in his choice of cross-ties are to be accounted for from the fact that his buildings were composed of unbaked clay, which set unevenly, according to the quality, the position, and make of the squares, little or no foundation interposing between the crude brick and the elastic ground. The cross joists served to distribute even pressure along great surfaces; they regulated the setting of the clay mass, and prevented sinkings and consequent accidents on the weak points of the building.

In stone masonry, the employment of cross-ties was useful in another way. Granting a wall composed of small unsquared

units of polygonal blocks, transverse beams would provide the mason with the requisite straight lines which the humblest abode cannot dispense with; they supplied him with a continuous horizontal plane, restful to the eye amidst a maze of irregular materials; they enabled him to set up his doors and windows in the wall and the roof. In after days, this function will be performed by kiln-baked bricks, arranged in bands to divide the surface of a rubble wall or ashlar work. It is an expedient frequently resorted to by the Roman builder and his modern colleague as well, whenever his materials are ill-defined or of no great size. The main defect of the method chosen by the Mycenaean constructor is that it brings together elements of different



FIG. 179.—Troy. Masonry of wall restored.

powers of cohesion and durability. Wood, unless protected by paint or stucco, soon rots away and crumbles into dust. In brick walls this disadvantage is trifling enough, for the clay sets into a coherent mass of great strength, and although the timbers gradually fall away, leaving gaps behind, they have no effect on the solidity of the wall. The case is quite different in stonework, especially with bad mortar, as at Mycenæ and Tiryns. As soon as the stone above the cross-beam is no longer supported by it, a collapse is the result, and in sympathy with it the upper part of the wall either leans over or falls; this will be seen by a glance at Fig. 182, showing a piece of wall of the Mycenaean palace.

In spite of this serious drawback, the process in many respects was found so convenient as to have affirmed itself and survived the Mycenaean period. Thus, Homer describes Poseidon "casting into the sea all the foundations of stone and timber which the Achæans have erected with much labour and trouble in front of their hollow ships."¹ Similarly, Euripides writes in regard to the Theban ramparts: "You shall see foundation stones and trees, obedient to the voice of Amphion and the witchery of his music, forsake their mother earth to come and place themselves within reach of the workmen."² The poets would scarcely express themselves in this fashion, unless cognizant of walls such as they depict.

The arrangement of these ties is not as regular in stone as it is in brickwork, where they form a wooden frame, with

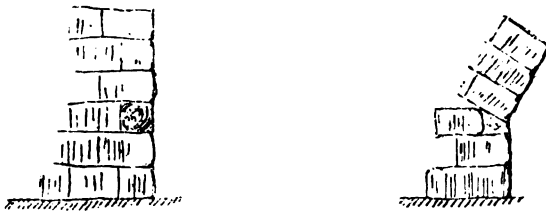


FIG. 180.—Mycenæ. Profile of palace wall, showing old and present state.

which the builder sought to impart greater power of resistance to his wall. Look for instance at our illustration (Fig. 175), where the mason seems only to have consulted his own sweet will or fancy. One of the ties appears eighty-five centimetres above the ground, whilst the topmost is sixty centimetres below the summit.³ This is very unlike the symmetrical division of the wall surface which we find at Hissarlik. On the other hand, we should not conclude from this that the mason had any difficulty in carrying out his work. Although the upper face of the schistose blocks is left almost in its native rudeness, all the edges of the joints are well dressed; they show a rectangular hole at stated intervals, from six to eight centimetres, whose purpose can have been no other than to receive a clamp for fixing the stone to the beam. This commingling of the two

¹ *Iliad*.

² These lines were lately found on an Egyptian papyrus.

³ TSOUNDAS, Πρακτικά τῆς ἀρχαιολογικῆς ἐταιρείας.

processes gave additional strength to the wall, as long at least as the timber was sound.¹

Such a wall stands midway between rubble masonry continued with crude brick, as practised at Troy and Tiryns, and masonry composed of great and small blocks, as we find in the passage and bee-hive tombs of Mycenæ and Orchomenos. Whole bricks have not been traced in the Mycenaean palace, where they seem to have been more sparingly used than at Troy and Tiryns; yet enormous masses of clay strewn the floor of the men's megaron seem to point to a crude wall, at least in the upper part of it.² The schistose blocks of rather considerable size—one is one metre thirty-five centimetres—with channelled edges found hard by, and which come from this same wall (Fig. 175), recall the similar units in the apparent part of the circuit, both in the lower city and the Lions Gate; hence we are led to infer that the palace, the monumental tombs of the lower town, and the portions of the enclosure with marked tendency to horizontal courses, belong to a single epoch. Remembering that Mycenæ remained an important centre down to the fifth century B.C., it is highly probable that in its wall we have the work of several distinct epochs, from prehistoric days onwards. The case is quite different for citadels such as Mideia and Tiryns, doomed from the outset, by their situation and narrow space, to play a minor part. The military genius of this or that chieftain may have raised the status of his native city for a season, but as the land became more thickly populated, supremacy was fated to pass to townships in possession of greater natural advantages, Mycenæ and Argos for example, where the advance of culture from age to age would place at the service of new wants more skilful processes, freer and bolder forms.

In the wall of Mycenæ, its explorers distinguish three modes of construction: namely, the Cyclopæan, the regular, and the polygonal; specimens of the three systems appear in Figs. 92-94. If we compare the first with the second style, exemplified in the Mideian wall and the Treasury of Atreus, the difference between the two will appear very great; in point of fact, however, they are very near each other. On the whole, the style of building, from the Tirynthian walls (Figs. 71, 72, 78) to the rampart gates

¹ TSOUNDAS, Πρακτικά.

² *Ibid.*

(Figs. 97, 99) and the domed-tombs (Figs. 118, 120, 121) of Mycenæ, is practically identical in all its essential and distinctive peculiarities. Calcareous blocks had only to be piled up one upon another, and horizontal courses would naturally follow without almost any artificial aid. We know that the Tirynthian builder had the necessary skill to cut stones of the required shape for the place they were to occupy, especially at the angles of the structure. Many of the blocks have had their external face roughly dressed. It needed very little additional effort to set up, as soon as he felt inclined, rectangular blocks, instead of the time-honoured irregular polygons. Masonry made up of units, uniform in size and dressed to an even front, was pleasing to the eye, and suggestive of the master-mind that had conceived it, served by a skilful artisan. It had at the same time the advantage of presenting a smooth and even surface, which would give no opportunity to the assailant of obtaining a foot-hold or catch at the projecting stones to help himself to scale the wall. Hence the tendency to horizontal beds which we scent here and there in the Mideian wall (Fig. 174), whilst in the rampart of Tiryns (Fig. 170) regular masonry is almost universal. If at Mycenæ this same tendency is still more accentuated, even where the aspect is rudest (Fig. 92), construction with horizontal and vertical joints is found in such parts of the circuit only as were most exposed, and provided therefore with additional strength, *i. e.* near the gates and the bastion that forms so bold a resault in the middle of the south-eastern front (Fig. 90). The inference that these portions of wall may be contemporary with those much more rudely constructed, is based upon the fact that Steffen noticed in places oblong stones, exactly like those of the most regular courses, found below Cyclopæan masonry. Thus, to make a solid footing for the rampart on the north-eastern face of the citadel, the rocky edge was cut away, and a well-dressed stone beam laid across the gap thus made, in bridge-like fashion; above it were piled stone masses almost in their native rudeness, and the hollows between the single blocks filled in, as at Tiryns, with pebbles (Fig. 181).¹ It is plain, then, that the same set of masons executed the Cyclopæan and the regular system of masonry; the latter is already found in embryo in the first, from which it tends to shake itself free towards the date of

¹ STEFFEN, *Karten*.

the Tirynthian wall. The citadel gate at Mycenæ forms the transition between the two systems. Regularity of masonry is seen at its best in the domed-tombs, particularly the Treasury of Atreus, which testifies to the great care bestowed upon it. The vertical and horizontal faces have been sufficiently well prepared to dispense with binding material; here and there, however, clay mortar with a small proportion of lime has apparently been used to hide imperfect joints, after the blocks were set up.¹ As a rule, the vertical joints fall over the centre of the stones immediately below; it is an arrangement which endows the construction with additional strength. The proportion of

FIG. 181.—Portion of north-east wall of citadel.

height to length in these units varies from one to three, four, or even five. Although these blocks are somewhat irregular, and their faces only partially dressed, the proportions are practically those of Hellenic masonry seen in the Messenian wall, and very nearly what Vitruvius calls "isodomon." Nevertheless, the masons who carried out the work in question were the pupils of the builders of the Tirynthian fortifications. Take as an instance of this transmission and persistency of methods, one of the rings composing the crown of the domed-tombs: the stones of which they are made up have not their rectilinear sides in the prolongation of the rays which from the centre would fall on the points of the circumference where two of the units of one ring

¹ F. THIERSCH, *Die Tholos des Atreus zu Mykenæ*.

meet, for the stones keep this direction only, close to the inner rim of the ring (Fig. 182). Some centimetres from this border, they begin to grow apart from each other, in such a fashion as to gradually form elongated triangles in the gap thus left, wherein large pebbles or quoins have been shoved in, whose function is to prevent displacement of the squares towards the horizon line. Whether greater solidity had not been assured to the dome with differently-shaped squares is beside the question. We have called attention to this arrangement to show that the method of the Mycenaean architect, in what may be considered his masterpiece, is fraught with uncertainty and extreme rudeness. The work shows no advance upon the older Cyclopæan construction. Thus, the mason filled the voids left in his otherwise

FIG. 182.—Mycense. Plan of last course of the Treasury of Atreus.

fairly well-constructed and imposing domes with stones obtained by cleavage, exactly as his oldest predecessors, the Cyclopes, had done when they wished to stop the holes everywhere manifest between the enormous blocks forming the Tirynthian rampart, which had been torn from the hill-side; some being quite rough, others barely touched with the tool.

Regularity of masonry, then, is no more than the perfect unfolding of the Cyclopæan system: both incontestably belong to the Mycenaean period. But we are less certain with regard to polygonal construction. At first sight it looks much more like the first system than does the second, with horizontal beds, (Fig. 93), but the resemblance is misleading. The materials beheld in Cyclopæan work are manifestly irregular, whereas we feel that the irregularity of the third method is but on the

surface: the arrangement of the polygons, which form a net-like structure, with uneven and dissimilar meshes, is intentional. The fineness of joint shown here is unknown to the two first systems, where there always remains some cavity which has to be made good with clay or pebbles. In polygonal construction, on the contrary, each block is cut in shape so as to fit it exactly to the contiguous stones, the concave angles of the one adjusting themselves with the utmost nicety to the saliences of the adjoining units. This implies a skilful and trained hand in cutting the blocks, for which they apparently used a shifting-bevel (Fig. 183).¹ Polygonal masonry appears on the main and small sides of the Mycenaean bastion, and as facing to the south-western tower (Fig. 90, and Pl. IX.), where each joint is perfect. On this well-arranged mass time has had no more hold than would

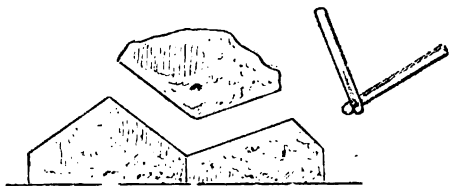


FIG. 183.—Polygonal stones and shifting bevel.

a hostile force in by-gone days, had an attempt been made to effect an assault on this side. The vertical height of this wall is still ten metres; it makes a rare brave show, and compares favourably with the mutilated condition of the Cyclopæan pieces adjoining it.

Polygonal work only appears on three points of the enclosure, and always alongside or above the two other systems, *never* below them: whence we may safely infer that its presence corresponds with later rebuildings; here it may have been necessary to rectify the trace of the wall, there to close a breach made by the enemy.

Steffen is inclined to think that the section of the rampart enclosing the sepulchres on the acropolis dates from the time when the royal cemetery became a species of sanctuary sacred to the memory of glorious ancestors; the direction of the wall

¹ Aristotle may have some such instrument in view when he speaks of "the leaden and elastic rule of the Lesbian mason, which adapts itself to the stone."

was then changed to improve the radius of the precinct,¹ and made to curve round the Lions Gate; and this is one of the sections where polygonal masonry crops up. Owing to the excavated earth heaped up by Schliemann against the wall, it is impossible to ascertain how far this subsequent erection stretched; but it begins northward of the curve and disappears under accumulations of rubbish. Finally, there is no trace of polygonal construction in the tombs of the lower town, where its place, one would think, was marked to sustain the heavy earthen weight which the walls of the dromos had to bear. These observations tend to prove that polygonal masonry did not come in until the historical age,² when it was employed in the circuit and sustaining walls, wherever exceptional solidity was needed. It is this quality inherent to the system which induces the modern architect to frequently introduce it into his work. We are unable to assign a date to the several rebuildings in question, save that they belong to the latter days of the Mycenaean period: they may coincide, perhaps, with the return of the Heraclids, and the erection of the Doric temple. At that time Mycenæ, though menaced by the growing power of its formidable neighbour, Argos, still held its own, and must more than once have had grave reasons for repairing and strengthening her defences. Who knows whether these reconstructions should not be placed in the fifth century B.C., on the eve of the fateful struggle which was to bring about her downfall? As we have already remarked, the total length of the Mycenaean wall is 925 metres; of these, 130 metres are built with quadrangular blocks, 70 with polygons, whilst 66 metres lie hidden behind excavated earth.

In all these structures, let the style of the masonry be what it will, by far the largest place is held by Cyclopæan construction, which constitutes throughout the body of the rampart. Behind dressed stretchers and finely-jointed polygons, which form but a thin cuirass to the wall surface, we always find a core made up of large blocks hardly touched with the tool. The ruling idea of the mason of that epoch was to build in Cyclopæan style,

¹ STEFFEN, *Karten*.

² M. Heuzey was among the first to point out that the circuit-walls of Acarnania, for which no great antiquity is claimed, show the two modes of construction side by side, *i.e.* regular and polygonal masonry; the latter often reposing upon horizontal courses.

unless weighty reasons compelled him to change his habits. Let us take as an instance the inner side of the front wall in which opens the Lions Gate (Fig. 184). Its original facing, arranged in horizontal courses, has disappeared and left a mass of irregular blocks. These we find again on both sides of the passage to which this gate gives access.

Such a system of construction involved walls of enormous—at times of really astonishing thickness. The mean depth of the Tirynthian rampart is from seven to eight metres, and fourteen metres on the southern face. According to Schliemann's measurement, the circuit at Mycenæ averages four metres eighty centimetres in thickness,¹ whilst Steffen makes it from three to seven metres, adding that here and there, on the southern front for example, the wall cannot be measured, but that its mass appears much greater, and pervaded with inner chambers and passages, as at Tiryns.² The depth of the walls of all the structures depended on the size of the materials the builder had at his disposal. Thus, at Tiryns some of the blocks are of colossal proportions; elsewhere, in later and better constructed buildings, these same artisans gave proof of astonishing power served by rare cleverness, for the units are not only dressed fair, but even more gigantic than the great masses composing the rampart of the oldest citadel. The lintel over the Lions Gate is five metres long, two metres fifty centimetres thick, and in the middle of the bay more than one metre high (Fig. 99). But the largest stone ever set up by the Hellenes, is one of a pair of gigantic beams covering the passage which leads to the main chamber of the Treasury of Atreus. In length it measures nearly nine metres, by five metres in thickness and one metre in height. It represents forty-five cubic metres of calcareous conglomerate, with an approximate weight of 120,000 kilogrammes. The subjects of Agamemnon were unacquainted with screw-jacks and pulleys, and must have used the lever, that most elementary of all appliances. As in Egypt and Assyria, the prodigious block had to be dragged by dint of strong arms and ropes to the foot of the structure, there to be slowly raised by means of rollers on an inclined plane, such as has been discovered in certain buildings of the Nile valley.

Dr. Dörpfeld thinks that in all probability the quarry was

¹ SCHLIEMANN, *Mycenæ*.

² STEFFEN, *Karten*.

FIG. 184.—Mycenæ. The Lions Gate from the inside of the acropolis.

worked with metal quoins, or simply picks ; but when the limestone was very hard they bored a deep round hole, into which a thick wooden stave was introduced, which on being wetted swelled out and loosened the block. Two of these stones are given below (Figs. 185, 186). In the first, the hole appears on one of the faces, and in the other on the edge. The solution to the problem why ramparts and sepulchres that have been in a poor condition since the fifth century B.C. should have survived to our day, when the temples and other public buildings which Pausanias saw at Argos have utterly disappeared, is to be found in the magnitude, and above all the irregularity of the materials of which they were made. To have re-used them would have involved quite as much expenditure of time and labour as when the old builders had slowly and painfully hauled them up in

FIGS. 185, 186.—Tiryns. Bored stones.

position. If they must needs have walls of great strength, it surely was much simpler to go straight to the quarry and cut what blocks they required, rather than demolish old structures whose stones had all to be dressed anew. In after times, when the ancient civilization became extinct, the new and needy generations used whatever they could get to build them wretched hovels, whether with sun-dried brick or small stones ; these were set up either in the rough or dressed fair on all their faces.

Timber had no place in such constructions as these, where none but materials of great magnitude were used, except for doors or tower coverings perhaps, and parapets along the curtain. That wood should have been put in this latter position is not so imaginary as it may appear ; traces of fire are everywhere visible on the top of the Trojan rampart and flanking towers. Buildings, however, chiefly composed of rubble and crude brick, opened wide their gates to timber ; the welcome was all the

more spontaneous that the builder beheld in it a friend of long standing. Here, as in all countries where there is an unfailing supply of wood, trunks of trees, planks, and branches may have constituted the primitive habitation. Here and there the walls might be of pisé or rubble, yet the supports, the roof, and verandah would be timbered. This is why the domestic abode at Tiryns and Mycenæ, even when it develops into a roomy and ample building—as in the princely palaces—will always retain certain features recalling the primitive mode of construction. We have already engraved many specimens illustrative of an atavism which prompted the artisans to use timber, even when capable of cutting and preparing stone.¹

If there is a vulnerable part in the building which more than any other requires to be protected against the weather and the peril of eventual shocks, it is the corner of the wall where three of its sides stand free, as also the sides of gateways and porches extending on three faces only of the court. Should the walls happen to be of freestone, the requisite solidity can be had at small cost; blocks heavier than those forming the body of the wall will effectually do this; for we then obtain the strengthening and projection which the Greeks called *parastadæ* and the Romans *antæ*. But our difficulties are greater when we have to build a pillar at the head of the wall with crude squares or small stones, and bring its surface to a smooth and firm front, uniting it intimately at the same time with the masonry, to which it acts as a cuirass. There is one way of solving the problem which seems to have been adopted in the Cnosus palace,² namely, to set up stone posts in advance of the wall, of sufficient massiveness to stand any agent, however destructive. It is a mode, however, which presupposes a builder accustomed to handle huge and unwieldy stone masses, but he can scarcely be expected to acquire the habit in localities where he almost entirely builds with very small materials. Of blocks that may be cited for their dimensions, there are but one or two at Troy, where they appear as sills. On the contrary, we find joisted ceilings, and timbered door-posts as tall as the house itself covering the free end of the wall. Six of these posts, in a carbonized condition, have been found in place at the entrance of the palace (Pl. I. A, and Fig. 48). These timbers—twenty-

¹ *History of Art.*

² *Ibid.*

five square centimetres—played the part of antæ, and stood on well-wrought stone plinths, into which cuttings had previously been made for their reception. They masked the whole of the external face of the wall, one metre forty-five centimetres thick, up to the roof, whose joists rested on them. The employment of wood at Tiryns, Mycenæ, and Troy in this situation may have been counselled on the one hand by the bold salience these square timbers furnished, and the firmer support they gave to the wood framing of the loft, and on the other because it was a more expeditious way of going to work. That the working of antæ and door-sills of limestone has been carried out in Argolis with the stone saw is proved by the marks left by the tool on the particular blocks. The saw of the Mycænian workman can only have been a bronze knife with a sharp point which a single workman held by the handle as he cut through the stone, using extremely sharp sand or loose moist emery. The size of the saw-cuts, whether at Tiryns or Mycenæ, is only two millimetres. When the stone was sawn two centimetres deep, the piece to be removed was struck off as far as the incision reached, and the sawing was begun anew.

The curves of these successive incisions still remain on the stones.¹ This primitive mode of going to work was very slow and not quite satisfactory, for it had the effect of leaving rugosities on the surface, often very marked (see Fig. 84), which the workman did not trouble himself to smooth away, being satisfied with polishing a narrow band around the edge of the block, trusting to the timbers to hide all blemishes.

Nevertheless, stone plays here a more important part than it does in the Troad, where very thin calcareous slabs, torn away from the parent rock, alone interpose between the wood beams and the ground (Fig. 189). In Argolis, on the contrary, they reposed, now on a base composed of several well-jointed slabs, now on a single block from fifty to sixty centimetres high.² Two different instruments seem to have been used in working the stone. Thus, whilst the soft sandstone has square holes cut with the chisel, the dowel-holes of the hard limestone and the breccia were made with the drill-auger, the lower end of which must have been a hollow cylinder or stout reed. The rapid twirling of the drill bored a round hole, in the midst of which a stone

¹ SCHLIEMANN, *Tiryns*.

² *Ibid.*

core remained standing (Fig. 84). These cubical masses are found both at Mycenæ and Tiryns.¹

The predilection of the Mycenaean workman for a wood cuirass at the heads of his walls extended to door-cases. Three or four timbers could be more easily put up than stone blocks of great size, which moreover had to be dressed fair. Now and again, in the case of a citadel gate or the entrance to a royal tomb, they did not recoil before the operation. That no such trouble was taken with regard to the bays and sills of the habitation, is proved from the fact that stone jambs have not been traced in the doorways of the Tirynthian palace, that the walls near them are calcined, and the carbonized fragments

FIG. 187.—Restored anta of building, marked A in Pl. I.

collected here can be nothing else but the remains of timbered posts.² At Mycenæ, the thresholds of the vestibule and the adjoining hall still preserve rectangular cavities, into which the door-posts fitted.³ If from settled habits and other causes, wood still held so large a place in the construction of these palaces, we should wrong the workman in attributing his reluctance to attack the stone to any embarrassment he may have felt in successfully shaping it any way he pleased. Besides the pick and cognate tools, he had a sharp-pointed hammer, a chisel,

¹ Dörpfeld counted twenty-six stone bases in the Tirynthian palace; Tsoundas likewise noticed them in the palace of Mycenæ; here, however, they are sandstone, and the holes seen on them are all square.

² SCHLIEMANN, *Tiryns*.

³ TSOUNDAS, *Πρυκτικα*.

a saw, and two different drills. The decoration of the domed-tombs is entirely made up of applied pieces, large marble slabs, cut very thin into a variety of shapes. To have endowed these with a very accentuated and diverse relief, notwithstanding their slimness, together with extreme fineness of joints, implies no mean skill on the workman's part, whose dexterity is no less remarkable in the spacious domed-chambers hollowed out behind these frontages. The external decoration has almost entirely disappeared, but the inner building is sufficiently well preserved to enable us to grasp the methods of the Mycenaean constructor. The cupola is circular on plan. To obtain a curve approaching the circle, the mason must have used a line fastened at one end to a post sunk in the ground, in the middle of the building then in process of construction; whilst he used the other end, which he slowly moved round the central pole, to exactly measure with the eye the distance from it to the stone rings as they rose in succession. The parabolic shape which the dome describes in elevation was obtained by corbel courses or off-sets until the top was reached; the angles were then knocked off, and at the same time the requisite convexity was worked on the surface of each block.¹

Thus, with the simple superimposition of horizontal courses, the architect succeeded in obtaining results which we now demand of the vault. But the system, though ingenious, is not free from grave faults. Here, as in the shaft-graves, the body had to be hidden underground, and the cupola covered with loose stones and earth; their downward pressure, however, was unevenly distributed, and the thrust greater on certain points than at others; hence the rings, which have not the same coherence as construction which makes use of voussoirs, in time slipped and overlapped one another with dire effect, in the Treasury of Atreus for example. The stones of that part of the cupola which faces the dromos have been moved towards the interior by the superimposed weight; although the pressure was not strong enough to tear away and hurl the units into space, it none the less has brought about a very marked depression in

¹ Abel Blouet and Thiersch think that the polishing of the stone surface was gone through after the units were fixed. The work could of course have been previously executed in the stone-yard; but here we may reasonably suppose the simplest processes to have been used.

that section of the building. Such a mode of construction has yet another drawback: it endows the upper bed of each unit with so sharp a section that the edge is apt to break off. This has actually happened in the cupola of Atreus, where most of the blocks have one of their borders split and frayed. Taken all in all, the defects of the system are counterbalanced by sterling qualities; since with the judicious choice and skilful management of the materials, as well as the piling of a compact mass around and atop the dome, many of these buildings were nearly whole towards the beginning of the century. Even now, the traveller who visits Mycenæ, as he steps over the threshold of the Treasury and looks upwards at the vast cupola whose top is lost in shadow, cannot forbear thinking of days long gone by, when doughty Achæan chiefs would gather here, either to celebrate the funerals or commemorate the death of their kings, the sons of Atreus.

Secondary Forms.

We have said what were the materials used by the builder, how he dressed them and put them together. Before we essay to restore the two principal types which Mycenaean art created, it will be well to point out how it interpreted certain subordinate forms, whose distinctive peculiarities contribute more than aught else to define the style and taste of a particular architecture.

Gates.

When we compare the existing gates of the edifices of this epoch, whether pierced in citadel walls, or in the façades of domed-tombs and rock-cut graves, what on the threshold strikes the observer is that each of these entrances, be they great or small, affects a trapezoid or rectangular shape. They are narrower above than below (Figs. 95, 97, 99, 118, 119, 121, 123, 131, 145, 188). The reason which counselled this choice is not to be accounted for by the æsthetic sense, but rather from the oft-repeated fact that the employment of timbered

cases persisted down to the last days of the Mycenaean epoch, even in the better class of buildings. If the habit was so

FIG. 188.—Orchomenos. View of doorway of tomb from the outside.

deeply rooted, it is because it mounted back to the glimmerings of this civilization.

The oldest buildings that have been uncovered are the prehistoric houses at Thera, whose window-frames and ground-sills were wooden;¹ as regards the doors, we can only say that they are represented by gaps in the wall. We are led, therefore, to suppose that the entrance to these habitations was of the most elementary kind, such as is found in the primitive hut, a mere triangular isocèle, whose small side was the sill, and the sloping beams which met the transverse timbers or lintel at the top its main sides (Fig. 189). No simpler arrangement than this opening could well be imagined. When the door was of considerable height, the need of a joist laid across the entry,

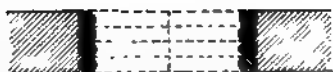


FIG. 189.—Primitive doorway. Elevation and plan. First stage.

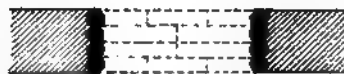


FIG. 190.—Elevation and plan of primitive doorway. Second stage.

at about two-thirds of its total height, must have been felt; be it to maintain the sloping jambs in their right position, and enable them to resist the lateral thrust of the irregular masonry, or to provide the door with a means of closing by a curtain which could be fastened thereto, leaving the space above it uncovered to let in the light. We find some such contrivance in the ancient houses of every epoch (Fig. 190). When windows placed in the proximity of the doorway rendered such an impost superfluous, it disappeared, huge sloping timbers were set up, and gave the door a trapezoidal shape (Fig. 191). It is this door which Schliemann exhumed at Troy, with the carbonized remains of its wooden door-case (Fig. 45).² If, owing to the poor state

¹ Fouqué, *Santorin*.

² *History of Art*.

of the Tirynthian and Mycenaean buildings, we do not meet it there in every hall of the palaces, we find it copied and imitated in stone at the main entrance to the acropolis of Tiryns. True, it has preserved but one of its uprights, but the four colossal blocks that make up the sill, jambs, and lintel of the Lions Gate are whole (Fig. 192).¹ The upper face of the latter presents a marked convexity, and all are of a different stone from that of the adjoining wall. The height of the doorway is three metres twenty centimetres; measured on the ground-sill its breadth is three metres seven centimetres, and two metres eighty-five centimetres under the lintel. It is the same with the northern postern (Fig. 97). As was explained somewhat earlier, the

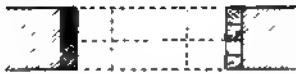


FIG. 191.—Elevation and plan of primitive doorway. Third stage.

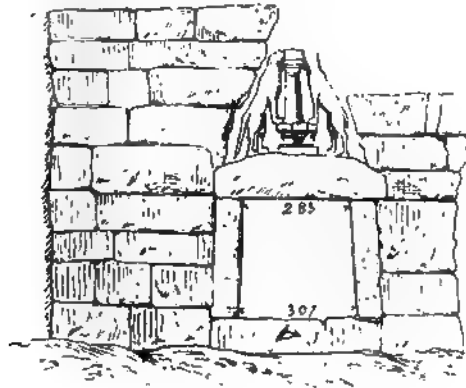


FIG. 192.—The Lions Gate.

arrangement was rigorously commanded by walls of irregular masonry, composed of blocks loosely piled up, with sides inclined in every direction. From settled habit, its employment was fitfully retained in well-jointed structures. In such cases it not unfrequently happens that the doorways have no separate posts, the last stone of the lateral courses being advanced in that position, in the domed-tombs at Mycenæ for example (Pls. IV., V., VI., and Fig. 201). We see, however, more than one specimen with independent door-frames in much later buildings, where the architect has seized the opportunity offered him of harking back to ancient habits, when they chanced to harmonize with his work; such as fortified enclosures, city and acropolis gates, portals to sacred buildings, found respectively

¹ *Expédition de Morée.*

at Messenia, the Parthenon, and the temple dedicated to Rome and Augustus at Ancyra and elsewhere. With regular masonry, vertical posts became useless. A door could be opened where required by leaving a void between the horizontal beds; for technical reasons, however, the stone beam was kept much larger than the adjoining blocks, and it became a separate piece endowed with exceptional dimension and strength. This independent member, however, was joined to the horizontal courses by means of a moulding, delicately worked into a band on the blocks which play the part of uprights and continued on the stone beam. The band is simple around the doorway of the chamber at Orchomenos (Fig. 161), as well as around those of the minor domed-tombs and the rock-cut graves at Mycenæ (Figs. 119, 123). But double fasciæ enframe the principal entrance to the twin great cupola-sepulchres at Mycenæ (Figs. 118, 121, and Pls. IV.-VI.).

The conclusion to be deduced from the change of style shown in the several entrances leading to the domed-tombs and the castles at Tiryns and Mycenæ is as follows. The date of these citadels was not far removed from the time when irregularity of masonry compelled the builder to copy in stone the primitive wood frame of the hut. He was so far wedded to the old arrangement as to continue it in the succeeding stage, although regular courses had become pretty frequent; but when bee-hive graves were multiplied in the lower city, the mason was so habituated to this style of construction that it seemed natural to him to contrive his openings by means of a space left in the horizontal beds that composed the wall. By itself, the difference of plan which the constructor adopted for his doorways would suffice to prove the later date of the domed-tombs, as against the citadel ramparts of Tiryns and Mycenæ.

Moreover, we already find in Cyclopæan masonry openings obtained without the insertion of a wooden or stone frame, by the simple system of corbelled courses (Fig. 193). But the arrangement has only been employed for subordinate openings, windows, and posterns. From a certain height the side blocks advance, each beyond its fellow underneath, and as the projection of each stone forms a slight curve, the result is an entry which gives the impression of a pointed arch, rather than that of a triangle. The monuments show stones of almost every

conceivable shape and size; but the cut is sometimes sufficiently irregular to make it difficult to define, in the vertical plane, the section described by the arrangement of the courses; hence it is not always easy to make them out in the structure. Sometimes the uppermost stone really acts as the key-stone of an arch; whence one is almost tempted to believe that the principle of the vault has been grasped (Fig. 73). Generally, however, we find two terminal blocks, which either lean directly against

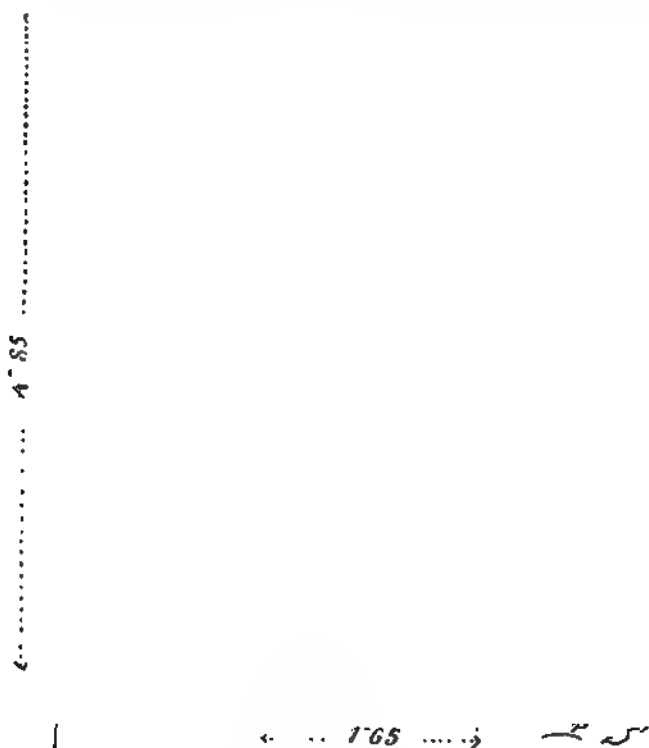


FIG. 193.—Entrance to gallery, east wall.

each other at the upper edges, or against a third stone set between them from above (Figs. 74, 78, 193); or, again, the unit is horizontally placed in lintel-wise fashion. A very similar arrangement is beheld in a circuit of Samothrace. The island was known to have been peopled by Pelasgi, and their dialect was spoken there in historical times. It is the same with the small entrance, triangular in section, pierced in the citadel wall of Mycenæ (Fig. 95), to provide the garrison with a secret means of access to the Perseia. This opening, with its sloping sides,

greatly resembles the simplest timbered cases which we have conjecturally attributed to the earliest doorways of the habitation (Fig. 189). The choice of so awkward a shape as this cannot be explained on the basis of the Cyclopæan construction in which it appears; we are inclined rather to view it as an abiding reminiscence of a traditional type.

It is a long cry between this rudimentary, thick-set door to the well-proportioned and richly-decorated entrance which gives access to the two great Mycenaean domed-tombs, and which may be considered as one of the most distinctive works of Mycenaean art (Pls. IV.-VI.). Its main features are the following: the portal is flanked by semi-columns, the case is slightly grooved and rounded off at the angles, and a stone or bronze beam is placed over it in pent-house fashion. These several points, embedded pillars, double fasciæ, pent-house and rounded-off corners, are never seen again in the later doorways of classical architecture. But their tale is complete in a small terra-cotta model from Cyprus, wherein we recognized a copy of a temple of the Phœnician Ashtoreth.¹ The same arrangement is seen on a monolith door-frame which De Saulcy picked up in Palestine; where, too, the moulding stands out in bold relief, and the angle formed by the junction between door-post and lintel has been masked by a floweret.² Similarly, the maabed at Amrith, the sole existing example of the Semitic temple in Phœnicia, is provided with a wide, projecting pent-house.³

Are we to infer, from the manifest analogies observable between what may be termed the Phœnician entrance and that to the domed-building, that the Mycenaean architect turned for his inspirations to the Phœnician models surrounding him, whether in the shrines erected by Sidonian mariners to Melkarth and Ashtoreth, all over the Ægean, or terra-cotta and metal reproduc-

¹ *History of Art.* The depth of the doorway is indicated by a couple of lines drawn from right to left above the lintel. The notion they convey is that of a door-frame akin to that which surrounds the portal to the Treasury of Atreus. If the modeller did not carry the lines down the sides, it must have been for economical reasons.

² *History of Art.*

³ The remark is due to M. Daux, who has studied the remains of a great number of buildings of the Carthaginian epoch in Africa. "Phœnician architects," he writes, "show a marked tendency to rounded angles" (*Recherches sur l'origine et sur l'emplacement des emporia phœniciens*, &c.).

tions of these same shrines, akin to the small golden temples that came out of Tomb III. at Mycenæ (Fig. 111) and the Cypriote sanctuary just referred to? We reserve our answer to a future chapter. If all the sills of city and sepulchral gates were stone, no such uniformity was observed in the thresholds of the habitation. These rang the changes between wood, stone, and bronze. We gather from the epithets *λαῖνος*, *δρύϊνος*, *μέλινος*, and *χάλκεος οὐδός*, used by Homer in regard to ground-sills, that he was acquainted with the three different kinds.¹ The results of the excavations at Tiryns have fully confirmed the poet's data, and if no bronze lining has been found, its absence is easily accounted for. In the palace have been traced, more or less distinctly, forty doorways. Timbered sills are of course no longer in position, but



FIG. 194.—Plan of women's megaron.

their site is indicated by carbonized débris, and no less than twenty-two stone ones are in place.² Two specimens of doorways, figured below, will help the reader to grasp their construction and arrangement. The first, Fig. 194, is the plan of the entrance to the women's megaron (Pl. II, N). A huge calcareous block, two metres by one metre twenty-five centimetres, forms the sill. The threshold strictly so called, ninety centimetres broad by one metre sixty centimetres, has been worked up to a smooth surface, two centimetres above the irregular ends of the block. The small sides of the sill were connected with three blocks dressed fair and level with the ground; the whole of the surface lying outside this band disappeared under the side blocks. Next to these come great sandstone masses, regularly cut, the form of

¹ *Odyssey; Iliad.*

² SCHLIEMANN, *Tiryns.*

which can be seen in the ground-plan. At the side of these stones, facing the doorway, are two grooves of some fifteen to sixteen centimetres broad, and three to four centimetres deep, which form a rebate of eight centimetres from the outer edge.

Collectively, then, the arrangement in question supplies us with the needful elements for reconstructing the elevation of the door. The pilasters or uprights rested on the irregular blocks adjoining the sandstone piers, and on the sunk edge of the enormous threshold. That the jambs were timber is proved by the traces of fire left on the piers and on the wall of sun-dried brick and rubble near the doorways, as also by the remains of charcoal, and the total absence of any stone upright about these entrances. Accordingly, there were here mighty beams joined to the lintel above, and the sandstone blocks at the sides, by means of tenons and mortises. The sandstone blocks stand out, antæ-



FIG. 195.—Plan of small door.

wise, four centimetres from the wall; they constituted firmer points of attachment for the door-posts than these would have found in the irregular rubble masonry of the wall. The stone masses were really pilasters, which, like the two semi-columns at the Treasury of Atreus, enclosed the door on both sides. Similar antæ or parastades occur nowhere at Tiryns, except in the great entrance to the men's hall, and probably also in the propylæum leading to the court; all the other doors were simpler, and had only a wooden framing. Such would be Fig. 195, which is one of the lateral doors opening on the vestibule of the women's hall. Here were no additional parastades, the wood posts being in direct contact with the wall of quarry-stones and clay brick; yet neither in this nor in the doorway described above are there traces of mortises at the sides of the sill or on the adjacent blocks, into which the posts could have been sunk. The massive uprights were kept in position by their own weight and the

thick wall against which they leant, as well as by the masonry above the lintel. The arrangement shown about the main entrances testifies to greater technical skill; the intimate union between posts and pilasters assured the solidity of the whole system.

In these several entrances the mode of closing was ruled by their greater or minor degree of importance. Of the forty doors in the Tirynthian palace, some appear to have been shut by a simple curtain; seven were double folded, the two propylæa and the door which from the vestibule leads to the men's megaron, for example. All the others were single. The presence of only one pivot-hole at the side of the entrance opening into the

FIG. 196. —Bronze pivot.

women's reception-room shows that in spite of its breadth—one metre sixty centimetres—the door was single (Fig. 194). Although narrower, the same arrangement, as might have been foreseen, occurs in the next entrance (Fig. 195). The main difference between the two doors resides in the way in which the wing is applied. Whilst in the door of the women's megaron the wing from without strikes against the posts, in the next the upright was provided with a special rebate, against which the wing leant when the door was shut. When open, the door leant against the inner side of the jamb. It turned on a bronze pivot, which was found in its socket, and is represented on plan (Fig. 194). The pivot was a hollow cylinder, of 118 millimetres diameter inside, and closed below into a ball-like shape. It formed, therefore, a sheath for the strong wooden

pivot of the door, to which it was secured by three stout nails. The rectangular cut in the cylinder was designed to receive the lower frame of the door, which was mortised into the side beam used as the turning-post (Fig. 196). Where the doors had wooden sills, the arrangement was probably the same.¹

The excavations at Tiryns and Mycenæ give us no information as regards the mode of closing domestic abodes: no keys have been found. But in the sills and jambs of many of these doorways are cavities clearly intended to receive the vertical and horizontal bars that served to bolt the doors inside.²

Column and Anta.

There has been found nothing at Troy—base, shaft, or capital—to remind us of a column. To judge from the prominent place held by wood, whether unsquared or wrought, in the building, we may safely infer that all the supports were timber. If these have left no mark, it is because stone bases had not as yet come into existence. At Thera, on the other hand, M. Fouqué discovered a very rudimentary stone base *in situ* in the principal room of one of the houses,³ and elsewhere two well-cut fragmental pillars of prismatic lava, square in section, still two metres in height.⁴ Hence it would appear that in some respects the art of building was more advanced in the island than at Troy. Unfortunately, the excavations at Thera, unlike those carried on at Mycenæ and Tiryns, have uncovered nothing but private dwellings. In the royal edifices of the latter, the column has assumed sufficient importance to have led the architect to invest it with proportions and shapes calculated to enhance the effect and fairness of the units. Stone columns appear in the façade of two Mycenaean domed-graves, but only as semi-columns, albeit

¹ Remains of a very similar bronze hinge were discovered in one of the doors of the Mycenaean palace. A bronze, horn-shaped hinge, which greatly resembles the Tirynthian example, was found at Balawat, in Assyria (*History of Art*). The difference consists in its having no square cut for the lodgment of the lower part of the door. This was differently fixed to the pivot.

² SCHLIEMANN, *Tiryns*; THIERSCH, *Die Tholos des Atreus zu Mykenæ*.

³ *History of Art*.

⁴ FOUQUÉ, *Santorin*.

independent, and clamped on to the wall (Pls. V., VI., and Fig. 101), whilst the engaged column carved over the Lions Gate is purely ornamental (Pl. XIV.). Here, then, is no true column; yet we are fain to turn to this as to the original type of that which once adorned the palace, but of which the base alone remains. We are obliged, therefore, to invert the natural order of research. Our notion as to the entasis and aspect of the column, now disappeared, but whereon reposed the coverings of Achæan palaces, will have to be formed on the characteristics of the false stone pillar. The supports which fulfilled this function are represented to-day by their bases alone. These we have no hesitation in identifying with the blocks seen on the very sites where, from other causes, columns might be looked for.¹ An example will suffice. Homer speaks of pillars found near the hearth, in the house of Alcinous, against which lean the principal personages seated around the fire.² At Tiryns and Mycenæ, MM. Dörpfeld and Tsoundas have disinterred open fire-places, enclosed by stone bases whereon pillars must have rested (Pl. II. M, and Fig. 116). Pillars were wanted at this point to support the roof-framing and diminish the length of span of the joists.

No matter where we find these bases, whether in the middle of a room, at a vestibule entrance, or the sides of a court, we are never doubtful as to their destination (Fig. 84). They fall under two heads: (1) blocks with irregular edges, on the smooth surface of which an inner circle has been raised about three centimetres above the surrounding field by cutting; (2) irregular blocks which are smoothed on the surface, but have no central disc. The former are older, and coincide with the erection of the palace; such would be the Tirynthian examples of which we give a section and plan below (Fig. 197). The second class has been recognized by Dörpfeld as rude relics of a restoration, which latter he would place in the last days of the existence of the palace, ere it was destroyed by fire, the traces of which are visible on many a point.

The arrangement relating to the column differed somewhat at Mycenæ. Here bases were completely sunk into the ground, and their junction with the shaft occurred below the concrete

¹ SCHLIEMANN, *Tiryns*. For Mycenæ, see TSOUNDAS, Πρακτικά.

² *Odyssey*.

pavement, in the men's megaron for example. The presence of bits of metallic plates, with the nails which served to fix them being still found adhering to them, near one of these bases, is suggestive of a bronze covering for part at least of the column; the better to assure the solidity of this armour, the lower edge was inserted into the beton mass.¹ A round base involves a shaft of similar form; and this can only have been timber. The head of the walls was furnished with a wood cuirass which has

FIG. 197.—Base of column. Section and plan.

left unmistakable marks on the stone plinth.² It is plain that both antæ and columns found at the entrance of the porch must have been timber, for at Tiryns alone Dörpfeld counted thirty-one stone bases *in situ*; whilst of the shafts and capitals that must have surmounted them, not the smallest vestige has been found. So significant a fact cannot be the result of chance. Had there been here a stone column, bits of it would have cropped up, as fragments of the Hellenic age do crop up, on the site they once occupied about temples and other edifices.

¹ TSOUNDAS, *Πρακτικά*.

² *History of Art*.

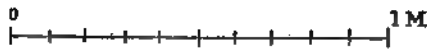
A further proof, if such were needed, would be found in the condition of many of these bases. Their edges have been eaten by fire, but the centre is hardly touched; proving that ere the fire which consumed all the woodwork penetrated the centre of the base, the wooden pillar had separated and fallen from its plinth.

This is all the information respecting wooden supports which study of the ruins supplies us with. We are as confident of their existence in the palace, and that in no small numbers, as if they had not stirred from their bases. It seems probable that the building in question had all its woodwork, including the pillars, overlaid with a coat of paint if not with metal plates. A capital is required at the point of junction between jamb and architrave, to enlarge the field of contact and re-assure the eye as to the solidity of the support. Shaft and capital are gone; yet their proportions and the profile of the capital are known to us from those seen at the entrance of the Tomb of Atreus, and over the Lions Gate at Mycenæ, as well as from those figured, in small, on ivory and glass pastes. As this column never had a separate existence of its own, its value is but that of a copy or reproduction; the strange forms which serve to characterize it were invented ere it came into being, notably its entasis, whose diameter is less above than below. It tapers downwards, contrary to all known types of the column, whose greater or lesser diminution is effected from summit to base.¹ So unusual, so opposed is this arrangement to that of all other architectures which make use of the column, that at first it was thought to be due to a mistake on the part of the observers who had pointed it out. At last we had to surrender to the logic of facts. The column seen over the Lions Gate is 365 centimetres round above the plinth, and 415 centimetres under the first moulding of the capital.² This same peculiar contraction is observable in the fragmental shaft rising at the entrance to

¹ In Egypt, where the pillar presents so great a variety of shapes, we find once, and once only, a column whose greatest diameter occurs towards the capital. It is found in the great avenue at Karnac which goes by the name of King Thothmes, who constructed it. But we should regard this specimen as the whim of an architect who was minded to produce something not seen before. The shape he invented found little favour, and was never reproduced again.

² I measured the shaft in question from a cast preserved in the Berlin Museum.

Mdme. Schliemann's Tomb (II.). As it stands, the difference between the point near the base and its broken top is five centimetres (Fig. 198). The traces which the semi-column at



2,65

FIG. 198.—Second domed-tomb. Elevation and plan of portion of façade, left of doorway.

the Treasury of Atreus have left on the wall plainly show its downward tapering (Pl. IV.);¹ it is no less well marked in a mutilated ivory column which was picked up at Spata, and doubtless is the broken limb of some funereal piece of furniture

¹ *Tiryns*, Adler's Preface. See ante, p. 259 n.

(Fig. 199). A complete restoration of this pillar will appear in Plates V., VI., XI., XII., to be devoted to a reconstruction of the palace and the tomb.

The reader will then gain a clearer idea of what at first sight appears an unnatural inverting of the parts. It looks head downwards. The mind is at first perplexed ; presently, however, it settles down to a reflective mood, and is gradually led back to a time when none but wooden constructions obtained. In this way it pictures to itself the several primitive types of the habitation. There is first the hut of unsquared timbers ; let its shape be conical, circular, or rectangular, the wall membering is invariably composed of piles or posts sunk into the ground. The next step onward is a house made of rubble or crude brick ; its style is still very rude, yet it is already endowed with a certain

FIG. 199.—Spata. Fragment of small ivory column.

amount of resisting power, and is also better closed. If wood plays scarcely any part in the actual body of the wall, the building itself is always preceded by a kind of porch, roofed over with planks and beams, which rest on massive timbers.¹ The early builders soon found out that these supports must be cut to a point below to facilitate their entering the ground easily. With a little more experience, they learnt how to interpose a slab or cubic stone between the post and the moist earth. When this progressive stage was reached, previous habits were of too long standing to be easily relinquished. Hence is explained why a shape originally given to wooden posts should have been retained in stone pillars. The props of our chairs and tables are a survival of the primitive arrangement in question. Accordingly, the Mycenaean column, whether wood or stone, is but an enlarged

¹ *History of Art.*

pile or timber beam. When erections assumed greater elevation and amplitude than the simple hut, slender piles were replaced by trunks of trees. In utilizing these, they were set up head downwards, and the habit was continued long after the introduction of stone supports. If the practice was retained, it was not entirely due to routine and confirmed habit; they also found it useful. By this arrangement the largest section of the jamb came in contact with the architrave, always apt to bend and break under the heavy burden of the superimposed terraced covering.

There is yet another feature which points to the wooden origin of the Mycenaean column; namely, its exceedingly slender proportions. Its gracility far exceeds that of the Doric pillar at any time of its existence, which it so nearly resembles in other respects. Starting from the normal relation of the thickness of the wall to its height, it has been conjectured that the columns of the Tirynthian and Mycenaean palaces, in elevation, must at the least have numbered from eight to ten modules; the module, according to Vitruvius, being the greatest diameter of the column.¹ Here, as we know, the greatest diameter occurs at the upper end of the shaft. Taking the first module under the capital, it is found that the false semi-columns at the entrance of the Treasury of Atreus number over ten diameters. Among the Hellenes, the Corinthian order, the latest and slimmest of all, is the only one which ever came up to these proportions; the later Ionic ranked next, and the Doric last. Whenever a stone pillar plays a useful part in the construction, it invariably is short and thick-set in its infancy. With full maturity alone, when greater elegance is sought, does it taper and lengthen out. The condition of the wooden support is just the reverse of this: it is first a pole, then a tree, selected among pines or poplars for the sake of a straight and graceful stem, and it ends in a column by assemblage, composed of several superimposed drums. The distinctive peculiarity of this column is its slim proportions, a peculiarity which it will retain in a more advanced and ornate style of architecture, when the builder has long been acquainted with the employment of the hardest stone. Then, too, the Mycenaean pillar is indebted to its model for its capital. This at best is but an applied piece, which reproduces with more or less

¹ *Tiryns*, Adler's Preface.

precision the proportions of its pattern, *e.g.* the twin members of the capital of the real column found in the palace. The members in question are plainly discernible in the copy; the practical necessity which gave rise to each of them is not hard to grasp. The capital is composed of an abacus or plateau placed under the architrave, and a kind of pillow between the abacus and the shaft, which corresponds to the echinus of the Doric capital. The same impulse which suggested putting the abacus in this situation, also counselled having the architrave supported by the largest section of the jamb.¹ To make the quadrangular and deeply-projecting abacus useful, it became

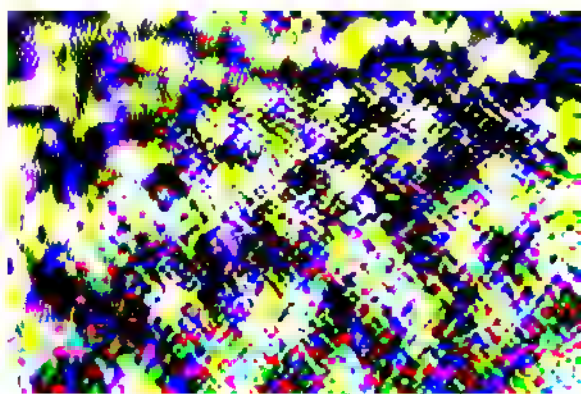


FIG. 200.—Green breccia capital. Height 0 m., 60.

necessary to provide it with a solid support, and the thickness and breadth of the upper part of the shaft opportunely came to render this service.

The broadening in question is seen in the capital of the Treasury of Atreus in the shape of a large torus, whilst a double cavetto connects it with the shaft on the one hand, and on the other with the abacus (Pl. V. and Fig. 200).² Such transitions from one member to another were of course not skilfully

¹ In a house of the Mazenderan figured by us (*History of Art*) it is a roundel which plays the part of abacus. The effect produced by the plateau, though very similar, is far more clumsy.

² As the above fragment is seen in perspective, the accompanying scale, divided into centimetres, of this and Fig. 207 cannot be given accurately.

managed in capitals associated with the oldest buildings ; nor did the members present profiles as elegant as those which we find here. The abacus was made to rest directly on a large cushion, which the tool had carved in the lower section of a tree. If this rudimentary type was soon left behind, the determining cause was not solely due to constructive requirements, which induced the architect of almost every country to place the member we call capital between the architrave and the shaft. The right angle produced by the junction of the upright and the horizontal beam would seem to have a disturbing and unpleasant effect on the eye, when this intermediary member is wanting. Among the nations boasting an architecture strictly so called, the number of those that have been content to dispense with this mode of union is exceedingly small. The Chinese, apparently, are the only people that went about it in a systematic fashion. Everywhere else they provided the pillar, like a human body, with a head (*capitum*). Its very name bears witness to a vague perception of mysterious analogies which the ingenious and subtle mind of the Hellenes had grasped. As soon as the æsthetic sense awoke in the Mycænic constructor, he ceased to be satisfied with assuring durability and power of resistance to his columns only, he aimed also at making them fair to look upon ; and the capital, better than aught else, with its happy proportions, breadth, and wealth of ornament, accomplished the desired effect. The type, which he greatly improved in succeeding ages, is the one we know in a fragmentary state at the tombs' entrances, and is no more than a copy of those which appear in the same situation about the palaces. It will cause, then, no surprise that the timbered capitals in the Tirynthian palace should be restored from the stone specimens under discussion (Pls. XI., XII.).

If during the progressive stage of the capital the base remained at a standstill, the curious anomaly is to be accounted for in the stone materials of which the latter was made. This ruled its being from first to last, in despite of greater regularity of shape, a simple cubical mass interposed between the ground and the wooden support. The plinth in question is always insignificant, and barely a few centimetres above the ground, whether we meet it in the tombs' frontispiece or that of the palaces, where it really did duty as a base. It is regularly

shaped in Tomb I. (Pl. V.), and semi-circular in Tomb II. (Fig. 198).

The species of atrophy which befell the base is to be explained by the very subordinate part played by stone in these buildings, where blocks of great calibre only appear in the foundations, whilst small stones scarcely dressed at all, and overlaid with clay or stucco, everywhere constitute the body of the walls. The visible parts of the building were made over to the carpenter, cabinet-maker, and house-painter. In such conditions as these, we need not wonder that the supreme effort of the builder should have concentrated itself on shaft and capital. Both were timber, and both benefited by the facilities which the pliancy of wood offered to the ornamentist, who can

FIG. 201.—Fragment of ivory column.
Actual size.

FIG. 202.—Fragment of ivory column.
Actual size.

carve it into beautiful shapes, or use it as backing to metal incrustations. The probability that somewhat ornate buildings should have had their woodwork plain and undecorated is very small indeed. The semi-column of Tomb II. is fluted (Fig. 198). As the number of its flutes is thirteen, twenty-six would go round the whole pillar.¹ They are tangent to one another, as in the Doric column. The same arrangement is shown in one of the diminutive ivory supports referred to above (Figs. 201, 202). The tenon projecting from the lower portion of the colonnette, and the mortise hollowed in the upper face of the abacus, indicate that it belonged to some small piece of furniture, such as a votive casket which had been placed in the grave. The mode of assemblage adopted here cannot have greatly differed from that which was applied to the real column when it exceeded a certain height. The number of the flutes is twenty-four.²

¹ *Bulletin de correspondance hellénique.*

² TSOUNDAS, 'Ανασκαφαὶ τάφων ἐν Μυκηναῖς.

That the employment of flutes should have been general in the Mycenaean column is but natural. There is little doubt that they first made their appearance in wood, whence they passed to the stone column, which so thoroughly adopted them as to

FIG. 203.—Fragment of shaft of Tomb I. Height, 0 m., 22; width, 0 m., 17. Green breccia.

seem unable to exist without them. The bite of the gouge produces at one stroke those striæ whose depths, as they fill with lighter or deeper shadow, bring out the roundness and delineate the contour with firmer accents. Instead of flutes, however, there appears on the column of the Treasury of

Atreus a series of chevrons in slight relief, enframed in bands covered with spirals (Fig. 203). These furnish us with a clue as to the embellishment of the palace column: we divine forms other than flutes. The chevrons under notice, carved in low relief on very hard stone, are reminiscent of those bronze, gilded strips which are fastened with nails to a wood backing whose existence the metal shreds found near to certain Mycenaean bases bear witness to.¹ Wood does not lend itself kindly to over-



FIG. 204.—Green breccia capital.

fining; to have demanded of it, therefore, delicate slender spirals had been well-nigh impossible. There was no such difficulty with metal. Curvilinear forms of the nature beheld here are found everywhere in ornamental pieces that have been collected in the Mycenaean graves of the lower and upper city, be it on vases, on gold, silver, or bronze objects. Wood-carving and metal sheets may very well have been concurrently applied to one and the same column. Hence the pillar seen in the palace façade has been restored in this style by us (Pls. XI., XII.).

¹ *History of Art.*

The middle of the shaft is seamed by flutes, and metal strips, covered with chevrons and spirals, surround the upper and lower parts. Again, we scent metal in the ring of leaflets which adorn what Vitruvius calls the *apophyge* ("escape") (Fig. 204). The leaves could of course have been rendered in wood, but they would not have come out as distinctly as they do in stone, nor with so sharp and well-defined an outline. The forms they present in these marbles—where they have been preserved to us—had previously been modelled by the chisel in repoussé, out of bronze zones which served to hide the junction between shaft and capital.

We could wish that the conjecture suggested by an ivory tablet which has been picked up in the Menidian grave were capable of being verified. On a plain semi-column, dividing the field in twain, is exhibited what one is tempted to call the canonical type of the Mycenaean capital (Fig. 205).¹ Each division is filled with a brace of winged sphinxes. Upon the piece of furniture with which this tablet was associated, was apparently reproduced an arrangement borrowed from some building; a palatial frontispiece, a portico, or a hypostyle ordinance which supported the ceiling of some hall or other. There is yet another version for the use to which the semi-column could have been put. It may have been utilized, notably in the inner building, to break the long, monotonous line of wall.

The columns which we have studied, either on a reduced scale or full grown, have enough characteristics in common to justify our considering them all as trial specimens, and more or less off-shoots of a unique type. We are thus led to infer the existence of a Mycenaean order in the architecture of pre-Homeric Greece, which, like its later Doric, Ionic, and Corinthian sisters, is defined by the proportions and entasis of its shaft, the shape of its base and capital. We shall have to find out if, among the classic orders, there is one which very nearly approaches this primordial type. Between the Mycenaean pillar and its nearest fellow there is always a main difference, arising from difference of materials and the function which each has to fulfil. In the Mycenaean portico, pillars certainly relieve the beam which supports the entablature, but the principal weight of the archi-

¹ *Das Kuppelgrab bei Menidi.* The above engraving only shows one-half of the tablet, in length thirty-eight centimetres.

FIG. 205.—Ivory tablet. Half-size.

trave bears upon the joisted antæ, and above all the side-walls whereon it rests and which it penetrates. The carpentry of any one frontispiece which we have essayed to reconstruct (Pls. XI., XII.) results in a system of assemblage which, theoretically at least, could be taken to pieces without injury to any one of them, just as the constituents of a chair or table may be displaced. The whole forms a frame, the most essential parts of which are the lateral uprights; it may also be compared to a comb, of which the teeth would be the columns. When the two walls were very widely spaced, the timbered architrave was necessarily composed of several pieces mortised into one another, and further secured by pins and clamps. The point of junction between any two pieces was of course the weakest part, and most apt to break. These points required the strengthening support of the thickest part of a pillar; if the diameter of the shaft was less below, no great inconvenience could arise therefrom, since it bore but a feeble part of the total weight of the entablature. The arrangements that will obtain in after times, when tufa or marble architraves, instead of being mortised into one another, will simply be placed on stone pillars and antæ, are widely different from these. That such a change of method should have been wrought in the shape, and what may be termed the significance of the column, is easily grasped.

In dealing with the construction, we explained by what processes dowel-holes were bored and cuttings made in the blocks for the reception of timbered antæ.¹ From the position of these holes, and the traces left by the wood on the bases, we are enabled to estimate the dimensions of the posts; these averaged from twenty-five to thirty square centimetres.² Whenever a wood beam thrown athwart a void rested its ends on the side-walls, the builder set up antæ composed of a bundle of stout timbers. As the walls were built of indifferent materials, antæ served to strengthen their corners, and enabled them to bear the weight of an entablature with superincumbent and heavy terraces. The Tirynthian palace still preserves twenty-six bases

¹ *History of Art.*

² SCHLIEMANN, *Tiryns*. Between the first and second vestibule of the Mycenian palace, the beams, according to M. Tsoundas, are as much as seventy-one centimetres at the side.

in situ,¹ which once carried timbered beams. The upper face of some of these blocks shows that they were never intended to carry a second stone (Fig. 84); but these are exceptional cases: almost all the blocks could have lent themselves to such a superimposition, but as they have dowel-holes on the surface they must have borne wooden pieces. This applies to bases with smooth fields. Thus, the adjoining walls of quarry-stone are preserved to a height of one metre, whilst antæ are everywhere represented by a single huge block, half-a-metre high. Given their dimensions, these blocks ran less risk of being carried away and re-used or destroyed than smaller building materials. Hence we have no hesitation in asserting that no matter the condition of their surface, these blocks were never followed by a second or third course; they are no more than a stone basement, a plinth whose function was the same as that of the pillar base.

The Mycenaean constructor, then, knew how to utilize enormous masses of stone in the erection of his citadel-walls; he showed himself an adept when he shaped out his units in unending variety, which he used for gateways, frontispieces, and royal tombs. But when he was required to build habitations that should be worthy of the powerful and wealthy princes for whom they were intended, he still clung to wood as to a friend of long standing, who could not well be given too big a place. From timber, accordingly, were derived the masterpieces of his edifice, its springs as it were, and on these he counted for carrying the very considerable weight of the flat roof.

Mouldings.

A stone architecture, as soon as it has constituted itself, possesses distinct mouldings of its own; and these are not among the least elements that contribute to its originality. This is the case with the architecture of both Egypt and Greece. Mycenaean construction, compounded with rubble and wood, was not calculated to foster variety or great expansion of mouldings. Besides, the upper parts of the palace, where all the resources of the builder's art would have been lavished, are gone, and all we

¹ Stone bases, with bits of wood still adhering to them, have been found in the Mycenaean palace as well.

know of his work is found in the megarons and the sepulchral façades, where the stones of the first course near the ground, though larger, have but a feeble salience beyond those of the superimposed rings (Pls. III., VII.). The only reliefs shown in the façades are (1) a stone ledge or pent-house which projects over the entrance to Mdme. Schliemann's Tomb (Grave II.) (Fig. 118); and (2) a very salient slab which overhangs the abacus of Tomb I. (Pls. IV.-VI.). We divine here a bronze beam, and have re-established it in our restored façade (Pls. V., VI.). The pent-house in question is a curious recall of the entablature seen over the porticoes, but it is impossible to consider it as one of those inflections or modulations of the form which are called mouldings. These are equally non-existent in the applied decoration surmounting the pent-house. The only real moulding is that which enframes the door of the Treasury of Atreus. But instead of being carved in relief, as that of classical architecture, it is formed of two deeply-grooved fasciæ, which are joined to each other, on plan, by a curvilinear line or cavetto. A precisely similar arrangement occurs in the second tomb—with this difference, that the fasciæ are connected with each other by straight lines (Fig. 198); whilst in the door-frame of the bee-hive graves of the lower city, the moulding consists of a single band (Fig. 124). Fasciæ, whether single or double, are apparently derived from timber architecture. When their junction is effected by straight lines, it produces the aspect of off-sets, or of planks set back the one from the other. A very analogous arrangement is observable in the façades of Phrygian and Lycian tombs, where the tool has reproduced in the living rock faithful copies of the house made of planks and beams.¹ The curve which served to join the bands is a later embellishment, bound up with the use of stone; a few blows of the chisel sufficed to modify the profile in the direction of a more cleverly-contrived transition.

Decoration.

In the Mycenaean building, the characteristics of the decoration were determined in advance, by the nature of the materials and

¹ *History of Art.*

their consequent mode of employment. Apart from subordinate sections, such as column and antæ bases, the component parts of the edifice were rubble and sun-dried brick, both of which required to be protected by paint, stucco, and bronze. Plastering calls for colour. This, when laid on the soft fresh plaster, gets fixed as it dries. The fresco process, it would seem, was discovered at an early date, and distemper liberally utilized to enliven the large surfaces of the building with a variety of tones; the brush accentuating with a different pigment, here lines that answered to the natural divisions of the structure, there more or less complicated figures. No colour has been discovered on the pottery of Troy, and tinted plaster nowhere appears on its walls. Its habitations, whether inside or without, are everywhere coated, first with clay mixed with straw, and secondly with a yellowish-white and finer earth, laid on as thin as a sheet of paper.¹ This is not the case at Thera; there polychromy appears on pottery, on the walls and ceilings of prehistoric houses, and the house-painter may be said to have fairly set out on his career. Although his decorative scheme is still very awkward and hesitating, it will none the less serve him later to clothe the inner walls of the Tirynthian and Mycænan palaces with fairness and magnificence.²

From Thera to Tiryns is a long cry. Nevertheless, the marked advance made by the Argolic painter in figure drawing and combination of lines is carried out with four or five colours only: white, dark brown, pale yellow, chalky red, and bright blue. The greenish tint seen here and there on these fragments is due to exposure. No genuine green colour has appeared anywhere.³ Red is of two distinct shades, light and dark; the artist has painted his grounds with the former, and traced the ornament with the latter.⁴ The whites are "reserved," as in an aquarelle, by leaving the whitewashed surface unpainted and therefore perfectly smooth; whereas pencil-strokes and bits of hair left by the brush are plainly discernible in the coloured parts. The wall-facings of limestone were certainly painted, to harmonize them with the lively appearance of the interiors, where colour was liberally applied to stone and wood. Large external surfaces were probably washed in with one colour only, and their lines broken with stripes of a different tone. In appearance, these

¹ SCHLIEMANN, *Ilios*.

³ *Vide ante*, p. 287.

² *Vide ante*, p. 492.

⁴ SCHLIEMANN, *Tiryns*.

houses must have greatly resembled the gay villas on the Riviera di Genoa, whose yellow, red, and blue veil is in strong contrast with the sombre green of the pine and cypress and olive. The main effort of the painter was centred on those parts of the edifice where his work would not be exposed to the elements. Here he did his utmost to charm the eye with richness of tones and multiplicity of figures. We should much like to know how these were distributed and enframed on the walls of the principal

FIG. 206.— Fragment of painted decoration. Height 0 m., 37.

apartments. All that remains of these frescoes—and that is far more than we had any right to expect—are plastered scraps which fell from the walls thousands of years ago.¹ Though evanescent, the colours are fairly preserved, on such bits at all events as had their face turned to the ground, for the covering débris shielded them against the influence of the weather. These pieces show designs which the brush has traced with unending repetition of the same form, or of two alternate ones: despite many lacunæ, therefore, it has been possible to piece together

¹ TSOUNDAS, *Πρατικά*.

a continuous ornament. Now and again it happens that, thanks to the untiring industry with which certain fragments have been sorted and arranged, they have succeeded in restoring almost entire figured scenes. We know now what were the pet forms of these painters, and the subjects they treated; this it is that enables us to form a pretty clear notion of their practical knowledge and qualities of workmanship. Nevertheless, for reasons to be presently adduced, we cannot restore a complete decoration of the Tirynthian and Mycenaean megarons.

FIG. 207.—Thera. Coloured stucco fragment. Actual size.

The explorers of Tiryns found only one somewhat large painted fragment in the south-east corner of the women's hall, where the plastering was preserved to a height of sixty centimetres above the floor. The ornament consists of horizontal bands of unequal height (Fig. 206).¹ One of these bands shows single rosettes, whilst in a much larger division appears a complicated and elegant pattern, composed of curvilinear lines which recall the scrolls of the Orchomenos ceiling. The single row of

¹ In this and Figs. 213, 215-217, 219, 222, 245, red is represented by cross-hatchings, blue by vertical strokes, whilst yellow stands for slanting and far apart strokes. Additional pieces are untinted.

rosettes, as well as the principal compartment, are enframed in narrow bands, yellow and blue, with red and black hatchings. The whole formed a dado around the room.¹ The decorator's choice doubtless was determined by the materials constituting this section of the wall. The style of building of that period was largely carried on with crude brick; and this as a rule was separated from the humid ground by a stone foundation, which received a special polychrome ornamentation. The habit once formed was retained, although no longer wanted for constructive reasons. Thus, at Pompeii, the walls generally are homogeneous throughout, yet most of them have a painted dado.

FIG. 208.—Thera. Coloured stucco fragment. Actual size.

Above it, the decoration of more than one room must have been monochrome. Among the plastered fragments strewn the floors of the various apartments at Tiryns, many were painted with one colour only, put in flat; yellow, red, or blue without figures. Elaborate and complicated patterns were kept for reception-rooms, where the artist was at liberty to indulge his fancy as he pleased. Art invariably begins with what may be termed the "stuffing" system. At this stage it looks upon blanks as lapses which are a reproach to its industry, eye-sores that must be put out of sight by all the means at its command, rectangles, circular forms, dots, and the like. It is probable that in dealing with great surfaces such as those of the megarons, the artist provided

¹ SCHLIEMANN, *Tiryns*. Tsoundas noticed the same arrangement at Mycenæ (Πρακτικά). There the dado is eighty centimetres high.

the requisite rest for the eye by subdividing his fields into panels. The tie-beams let into the brick or rubble wall, when not disguised by a plaster facing, would serve as a guide to partition the surface into more or less regular compartments. The apparent face of these timbers lent itself to painted ornament, or metal, ivory, and glass incrustations (*crustæ*). These might be purely decorative, or arranged into pictures the subject

FIG. 209.—Thera. Coloured stucco fragment. Actual size.

of which was derived from the living world, or again the two processes might be combined in one composition. That such was the plan generally adopted, appears from the decoration of the domed-tombs façade. The reader can convince himself of this by a glance at our restored frontispiece (Pl. V.). The decoration is bounded by narrow bands, which stand for the horizontal beams embedded in the wall, and the surfaces between these represent the masonry. On the bands are symmetric ornaments or spirals necessarily of feeble height ; but there is room in the larger spaces

for complicated scrolls dear to Mycenaean art, including figures. Such would be the stone façade (Pl. VI.), on which two lions are

FIG. 210.—Tiryns. Stucco fragment. Half size.

Painted. The tinted ornament that may have enriched the side facings of the entrance has left no trace behind; but we have

FIG. 211.—Plaster fragment.

evidences that there stood here a heraldic group. The façade accordingly furnishes us with a clue relating to the character which the decorative scheme assumed at the entrances to the

megarons. The lateral jambs embellished with a row of rosettes, bounding the façade, right and left, correspond with the vertical beams which intersected transverse timbers. Special patterns,

FIG. 212.—Plaster fragment. Half size.

largely made up of curvilinear lines, covered the woodwork and most of the plastered space as well. Amidst these complicated patterns, fields were reserved above the plinth for scenes of the

FIG. 213.—Plaster fragment. Half size.

chase or war, fragments of which will be reproduced in our chapter on painting.

The most archaic of these mural paintings are a few bits which have been picked up at Thera. They mainly consist of

1



on suit cliché

FIG. 214.—Plaster fragment. Half size.

alternate bands, grey and blue, or white and red, which extended across the entire panel (Fig. 207); but even there a marked

FIG. 215.—Plaster fragment. Tiryns.

effort is made to infuse variety in the decorative scheme, by the introduction of tall flowers, presumably irises, with long

FIG. 216.—Plaster fragment. Half size.

yellow stamens; either contrasted with broad red bands (Fig. 208), or grouped into a bunch, as in Fig. 209. Similarly, the painted fragments at Tiryns and Mycenæ, though showing a

decided advance, are still entirely covered with bands of many colours. These, however, are now studded with white dots (Fig. 210), now marked with perpendicular striæ (Fig. 211), or separated the one from the other, here by roundels (Fig. 212), there by rosettes and chaplets composed of heart-shaped leaves (Fig. 213). It is only in exceptional cases that the painters of these frescoes contented themselves with such simple forms; what they seem to have delighted in were circling, sweeping, and



FIG. 217.—Fragment of slab from the ceiling. About one-seventh of actual size.

broken lines, that would show off their dexterity and sureness of hand. Around a small dark circle, strongly relieved against the background, they drew spires and mighty curves of a more or less complicated nature (Fig. 214). Somewhat undefinable are forms with a general resemblance to the lozenge, except that their lines are sinuous instead of being straight (Fig. 215); circles, and a species of comb or rake occupy the centre of these cartouche-like figures (Fig. 216).

The most elegant and elaborate design of this kind which has been preserved to us, is that of the ceiling in the side-chamber

FIG. 218.—Restoration of the ceiling. One-thirtieth of actual size.

at Orchomenos (Figs. 158-163). It was carved in relief on the external face of the four covering slabs of green schist. These

were so deftly adjusted one to another that the trace of the design could be carried on uninterruptedly across the joints; it seemed as a rich fabric hung over the dead. A fac-simile of one of these fragments is engraved above (Fig. 217), so as to give the reader an idea of the spirit and vigour with which the work is executed. The symmetrical design by which these fragments are distinguished has made it possible to restore the whole pattern (Fig. 218). Like a carpet, from which it doubtless

FIG. 219.—Plaster fragment. Half size.

was copied, it has an oblong centre-piece, composed of interlacing spirals, from the corners of which spring palmettes or the corolla of a flower with a dart in the middle, which perhaps is reminiscent of a pistil. This is enframed by a double row of rosettes, and more interlacing spirals and palmettes, and again by another row of rosettes and a narrow fillet of dentils or striæ for the border. The chamber being oblong in shape, the intermediary band has not a uniform width at the four sides.

The distinctive peculiarities of this composition are all found in a fresco fragment from Tiryns. The exquisite delicacy and

precision of the sculpture at Orchomenos is of course to seek in the fresco ; but the forms are identical, be it the narrow edge with parallel strokes, or the series of rosettes and spirals, whence

FIG. 220.—Ivory. Actual size.

springs an arrow ; proving once more that the Bœotian decorator, like that of the Argolic plain, used the same models, worked on the same patterns.

FIG. 221.—Gold ornament. Actual size.

We find a variant of the spiral in the curious heart-shaped ornament which appears whether on the ivory plaques from Menidi, or on mural paintings at Spata (Fig. 219), and many a



FIG. 222.—Gold ornament. Actual size.

golden object (Figs. 220-222). The ornament we are discussing is of a somewhat undefined character : a pair of volutes fronting each other constitute the base, and flowing lines bounding its contour approach each other in the middle and conceal the point of

junction. We have here inflections and balancing of lines which are not devoid of grace. The palmette, for which the decorator seems to have had a special liking, returns on a Mycenaean ivory. Here the palmette is enframed in a narrow plaque, edged top



FIG. 223.—Ivory plaque. Length 0 m., 123; height 0 m., 17.

and bottom, a vertical band dividing it into two halves, which form semi-elliptical circles. "The composition chosen by the archaic artist," writes Dr. Dörpfeld, "has a superficial resemblance to the triglyphs and metopes of a Doric building, whether we meet it in pre-Homeric palaces or tombs." Nowhere,

FIG. 224.—Fragment of frieze. About one-fifth of actual size.

perhaps, are these points more distinctly brought out than in an ivory plaque from Mycenæ (Fig. 223). The essential characteristics are everywhere the same; differences bear on minor points alone. The vertical band of the Mycenaean plaque is furrowed by horizontal stripes; this order is reversed on the

transverse fillet. Similarly, among the finds at Mycenæ is an oblong fragment of red breccia, where the tool has graven a series of vertical stripes, metopes, and two semi-circles (Fig. 224). On the other hand, we have spirals in the central band of a glass piece from Menidi; the two semi-circles or palmette, however, are clumsy and mean (Fig. 225). Finally, the same

FIG. 225.—Glass ornament. Actual size.

form returns in its most approved and perfected style in the alabaster frieze from Tiryns, inlaid with pieces of blue glass. Our reproduction (Pl. XIII., Fig. 1) is after Dr. Dörpfeld. There, too, the central band is very broad; and a shallow groove, with a row of rosettes right and left, runs down the middle.

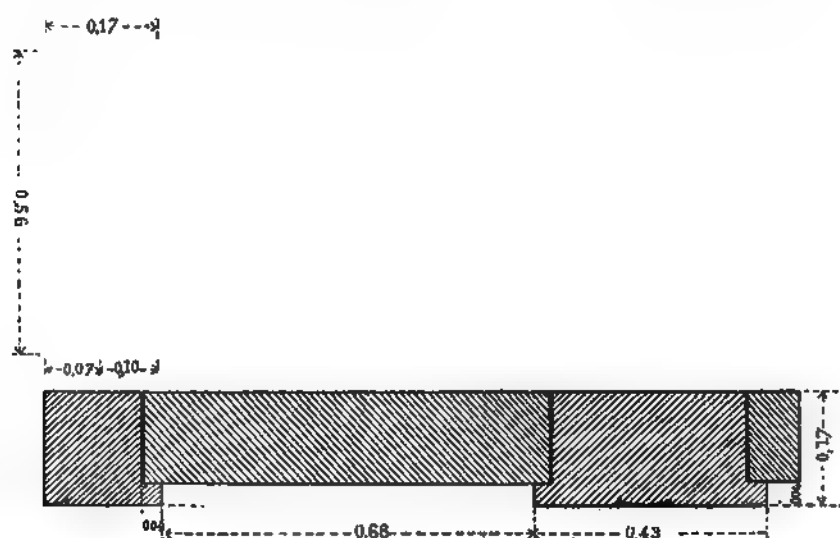


FIG. 226.—Plan of alabaster frieze and section through the narrowest part.

Between the palmette or semi-circle and the fillet encircling it there is a spiral, the movement of which recalls that of Fig. 214, from a wall of the same edifice. Inserted in the middle of volutes and rosettes are small round pieces of glass; whilst rectangular square plaques of this same paste, thickly studded, form the borders.

These alabaster slabs were embedded in the lower portion of the wall side by side. We shall show reason further on why this cannot have been their original place. In any case they were designed to constitute friezes, that is to say, bands where the pattern was repeated along the whole length of wall of the

FIG. 227.—Perspective view of the alabaster frieze.

apartment, and fitted to one another as shown in Figs. 226, 227. We have said that the part played by the ivory plaque (Fig. 222), in a casket or some such piece of furniture, was precisely similar to that which the frieze of the Tirynthian building fulfilled. This is proved by the tenon at one of the sides, and

FIG. 228.—A Ialysos vase. Height 0 m., 07.

the mortise contrived in the adjoining tablet for receiving it. The double groove which served to unite the band with the elements above and below it were deemed insufficient and unsatisfactory, hence each piece was firmly secured.

In going over the geometric ornament such as it unfolded itself at Mycenæ, we had no opportunity for adverting to shapes

formed by straight lines intersecting one another in every direction, such as lozenges, squares, the tooth-and-dart ornament, etc.; shapes which, in the following stage, will hold so large a place



FIG. 229.—Stela. Height 0 m., 76.

in the linear decoration of Hellas. This reticence on our part is easily grasped. Patterns made up of straight lines are almost unknown to the sculpture, ivories, and jewellery of the really



FIG. 230.—Ivory rosette. Actual size.

archaic period; the only instances known to us appear on half-a-dozen or so of vases from Hissarlik (Fig. 228).¹ Mycenaean art had a singular partiality for scrolls and broken lines. In my

¹ FURTWÄNGLER and LOESCHKE, *Mykenische Vasen*.

opinion, the only ornament evolved from a straight line, which this art has frankly adopted, is the chevron, and it is just possible that the popularity it enjoyed may be due to its offering a distant analogy to certain broken curves. Look at the stela which Tsoundas brought out of a Mycenaean grave; curvilinear lines

FIG. 231.—Ivory rosette. Actual size.

are seen on the main face, and chevrons on the small side (Fig. 229). The acute angles of the chevron form a strong contrast with the curves to which they are opposed; apart from

FIG. 232.—Gold rosette. Actual size.

this, however, a serpentine and rhythmic undulation is the distinguishing feature of both. Chevrons are of frequent occurrence on pottery, and they serve to adorn the semi-columns of the

FIG. 233.—Gold rosette. Actual size.

Treasury of Atreus (Pls. IV., V.), where they probably represent metal bands.

With the rosette we are on the border-land which parts geometric ornament from ornament deriving its inspirations from the vegetable kingdom. Despite its circular contour, many a

rosette (Fig. 230), divided as it is into the segments of a circle, is still dependent on geometric forms for its being; but however great may have been the artist's partiality for curvilinear



FIG. 234.—Decoration of bee-hive tomb.

shapes, which he traced out with a surety of hand scarcely to be exceeded by the compass, he ere long succumbed to the temptation of imitating the flowers he saw around him. Some, above

all the single rose and its congeners, daisies and the like, whilst offering him a form not far removed from the circle, are instinct with a suppleness and variety found in organic life alone. These rosaceæ, whose particular species it is not hard to divine, like those of Figs. 231, 232, are very simple, and given but seven or eight petals at most; the ribs on the leaflets of the latter are correctly marked. The sculptured and well-furnished rosaceæ of the ceiling at Orchomenos and the triglyphs of the Tirynthian frieze put one in mind of an aster. Occasionally an attempt seems to have been made to render the aspect of a double flower; the result, it must be owned, leaves much to be desired, in that two separate flowers appear to be clapped one upon the other, the greater serving as background to the

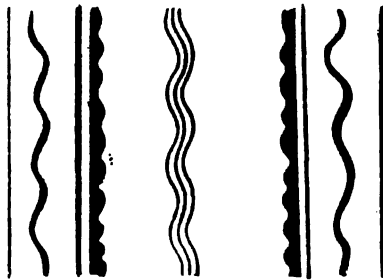


FIG. 235.—Decoration of terra-cotta vat.

lesser (Fig. 233). We recognize a daisy in the painted rosaceæ surrounding the doorway of a rock-cut tomb at Mycenæ, from its yellow centre and the pure white of its radiating petals; dashes of red and yellow, not found in nature, are put in from a mistaken notion of heightening the effect (Pl. XIII., Fig. 3). From the above specimens we learn how great and general was the employment of the rosette in the decoration of buildings, notably for borders. Had the artist been taught to put them there by the weaver and embroiderer? Or had the floral ornament come to him in that situation on imported fabrics? We are aware that rosettes, imitated from those seen on textiles, wreathed the doorways of Assyrian palaces,¹ precisely as they did those of the Mycenaean buildings.² Discarding for the present the question of origin or of transmission, we wish to point out that there is a notable difference between the Assyrian and the

¹ *History of Art.*

² *Ibid.*

Mycenian border (Fig. 234). Here, as in the Cretan sarcophagi (Figs. 167, 169), the rosettes are enframed by two of those undulating lines so much affected by the native decorator. No one will dispute the resemblance which the latter ornament bears to the corresponding lines enframing the rosettes of the Mycenaean doorway (Fig. 234). These same waving lines are separated in Fig. 235. It is just possible that Oriental models may have suggested the notion of making the rosette do duty as border; but where we find it so utilized it has become so intimately allied with the surrounding forms, and in general with the system of Mycenaean decoration, as to forbid us to seek here a



FIG. 236.—Plaster fragment.

foreign element; we hesitate to pronounce decidedly on a probable and direct borrowing.

In the rosette, we have a flower detached from its stalk and isolated from the plant that fed it. In such conditions it was impossible to prevent its assuming a more or less conventional shape. This applies in full to a chaplet, from a wall-painting discovered at Tiryns, composed of alternate blue and yellow leaves (Fig. 213). Nevertheless, we must remember that as far back as prehistoric Thera, the painter tried his hand at a realistic rendering of irises (Fig. 208), whilst from Tiryns comes a branch which seems to bend with the breeze (Fig. 236). The colours beheld about the forms, whether of flowers or

leaves, put in red and black, on a white ground, are purely

FIG. 237.—Plaster fragment. Two-thirds of actual size.

conventional; but the outline and the gentle movement of the

branch itself are well rendered. Elsewhere, in these same paintings, by the side of lozenges which take us back to the glimmerings of linear ornament, we come upon marine animals to which Mycenaean art opened wide its gates, and placed them on clay and metal vases, on furniture, personal ornaments, and engraved stones. So, too, from Mycenæ comes a mollusk of the cephalopodous genus, the lilliputian nautilus, which is found

FIG. 238.—Plaster fragment. Actual size.

plentifully in the Mediterranean (Fig. 237), and which the artist has drawn black on grey and red grounds. Nor is this all we glean from the curious Mycenaean finds; a small fragment exhibits portions of armed men and horses coloured reddish-brown, which are strongly outlined against a greyish background (Fig. 238). We have also great winged figures that belong to the category of fictitious beings found in abundance both in Egypt and Assyria.¹

¹ *History of Art.*

But the most important group is that of a wild bull chased by a hunter, which is almost preserved intact on the largest plastered fragment. We shall have to discuss elsewhere the spirit in which the artist interpreted the living form. Our present observations are designed to show what use was made of coloured plaster to enliven and vary the outward semblance of the structures.

What most struck the excavators of these paintings was the extreme freedom and skilfulness of the drawing. Of these qualities it is impossible to judge from the plates that have reached us from MM. Dörpfeld and Tsoundas. The draughtsmen employed on these restorations have made but too free a use of the compass; the rigorous symmetry which they have introduced in their forms is assuredly not consonant with archaic art, and as a matter of fact does not exist in the originals. Take, for instance, a row of rosettes, and it will be found that not two are exactly alike. It is the same with the wings of genii: the colours are all fanciful, and the plumes on different planes. Everything was dashed in off-hand by painters sufficiently masters of their craft to dispense with tracings or even cartoons; they drew and painted their subjects with the brush. Even though baskets full of these painted fragments were not to hand, we should none the less have divined how rapid and bold was the brush which traced them, and how universal among the inhabitants was the habit of throwing a coloured veil over all the surfaces of the building, within as well as without. So firmly established was the habit, that the horizontal divisions of the inner edifice were made to harmonize with the ornate vertical fields. For reasons of thickness, a certain proportion of the plastered paintings which have been exhumed at Thera are held to have fallen from the ceiling.¹ No opinion can be formulated as regards the ceilings at Tiryns and Mycenæ; if their joists were apparent—as we are inclined to believe—they must have been protected by a coat of paint, to bring that part of the edifice in harmony with the gay decoration of the floor. Painted floors are not found at Troy. Many of these exhibit a plain surface of beaten earth, others a pavement composed of clay and very small pebbles embedded in it, or flags of green schist. It is self-evident that a feeling for colour was as yet

¹ Fouqué, *Santorin*.

quiescent among this people; all its surfaces are dull and grey. The case is quite different in Argolis. Though the tombs and minor apartments of the palaces are paved with concrete interspersed here and there with pebbles,¹ the beton floor of the reception-rooms is everywhere overlaid with cement. The concrete floor of the megaron at Tiryns has a design composed of incised lines, which still preserve distinct traces of red colour on the larger central squares (Fig. 85). These are separated by narrow strips, on which are preserved faint traces of blue. "Hence the floor had originally the aspect of a many-coloured carpet" (Fig. 83). Very similar patterns furrow the concrete pavement of the Mycenaean megaron. If generally the tones have faded away, they were found still fresh and vivid on the stuccoed surface around the hearth. The horizontal layers are painted white, red, and blue, and the brush has traced a band of spirals

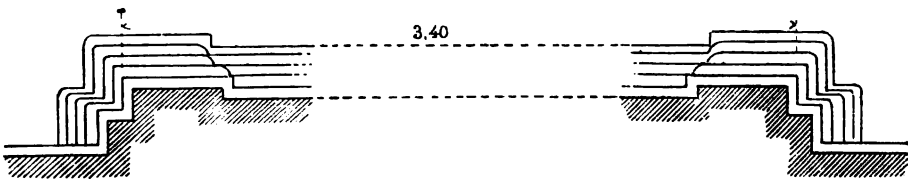


FIG. 239.—The hearth of the megaron. Section.

of which so many varieties have been figured by us. For obvious reasons the colours soon faded away, so that the plaster had often to be renewed; the hearth shows no less than five superimposed layers of stucco (Fig. 239), on which the artisan has twice at least repeated the same form (Pl. XIII., Fig. 2). As the eye travelled round the room, or was raised to the ceiling or lowered towards the floor, it met no surface but such as would divert and cheer it. There are no doors in the megarons; their entrances were closed by curtains fastened to the lintel, whose brighter and gayer colours added to the embellishment of an otherwise well-appointed apartment.

The character of the construction suggested the universal employment of fresco-painting, so that we meet it in one of the

¹ This is the case both in the tombs of the acropolis and of the lower city at Mycenæ, as also in the bee-hive tomb of the Heræum (*Athenische Mittheilungen*). As regards the pavements of private buildings, see SCHLIEMANN, *Tiryns*, and TSOUNDAS, *Πρακτικά*.

Mycenian necropolises, where one would have thought that a different mode of enrichment had been more suitable. Here, the rocky façade has been plastered and painted in imitation of that of the palaces (Fig. 234).¹ The best preserved of these coloured fronts is reproduced in our Pl. XIII., Fig. 3, exactly as it was when excavated.

This passionate love for colour found means other than painting to satisfy itself. By the side of an artificial polychromy there was a natural polychromy, resulting from diversity of the materials employed. The painter's brush, doubtless, travelled nearly as often over joisted ceiling as wood panelling; yet in some instances they may have been contented to rub the woodwork with oil, fat, or some resinous substance, which served both as a preservative and polish, and did not destroy the natural colour of the wood,

FIG. 240.—Glass plaque. Actual size.

whose deep, sombre tones formed a great contrast with the brighter hues of the fresco. Then, too, stones and metals, as well as artificial products, were selected for their native colour. Green breccia and red porphyry, apparently from entablatures, were unearthed at Tiryns and Mycenæ (Fig. 228).² Along the walls of the Mycenaean megaron the floor was paved with alabaster flags, whilst the centre had a concrete pavement with a chequered pattern, red and blue, in pleasing contrast with the yellowish white band which surrounded it. By far the most curious find has been the alabaster frieze (Pl. XIII., Fig. 1, and Figs. 228, 292). Inserted into cavities purposely made for them, were small pieces of blue paste; they served to accentuate the creamy white of the stone. The middle of rosettes, of spirals, and dentels, which latter formed the frames of both, were inlaid with

¹ TSOUNDAS, 'Εφημερίς.

² SCHLIEMANN, *Tiryns*.

glass, and cubes of the same substance made up the borders. We have evidences that the employment of blue pastes, though necessarily costly at that period, was fairly general. Quantities of opaque glass squares have been found in the tombs: some, intended no doubt to be sewn on to the garment, are furnished with tubular appendages (Fig. 240), whilst others of larger dimensions were applied to sarcophagi and furniture (Fig. 241). Undulating lines, in imitation of sea-waves, seen on the wall-paintings, re-appear on blue pastes (Fig. 242). Were the buildings in better condition, we should doubtless find here other examples of glass ornament. Metal was far more serviceable than this brittle substance. Beaten out with the hammer into thin laminæ, it could be cut of the required shape into facings and applied

FIG. 241.—Glass plaque. Actual size.

FIG. 242.—Plaster fragment.

pieces whose merit resided in great brilliancy and extreme solidity. For reasons easily grasped, very feeble traces of incrustations have been found in the ruins of the palace.¹ To estimate the importance of the services which the architect demanded of metal, we must turn to the bee-hive tombs, where both the façade and the interior of the vault exhibit dowel-holes into which were driven bronze nails that served to fix the ornament to the slabs (Figs. 162, 163, Pls. IV., VII.). Some of these nails are preserved in the Munich Antiquarium; they are gilt-headed, and the colour of the gold is as yet of a soft brilliancy (Fig. 243). In the inner edifice, wood alone served as backing to metal plates; timber furnished the sill, lintel, posts, and doors of the gate-ways, as well as the wainscoting of the apartments. In this symphony, each metal supplied its note, sad or gay, and the contrast gave out a harmony of tones the subtle charm of

¹ *History of Art.*

which was felt by Homer when he describes the palace of Alcinous—

Like the rays of the sun and of the moon shone
The lofty house of magnanimous Alcinous.
Brazen were the walls that ran this way and that,
From the threshold to the inmost chamber; and round them was a frieze of
blue glass [*θριγκός λυάνοιο*].
Golden doors shut off the well-closed house;
Posts of silver stood on the brazen threshold;
Of silver too was the lintel, and golden the ring which loosed the door [served
to unfasten].¹

Of course we are in full fairyland; yet it is clear that the poet was indebted to reality for the details of his picture. Nor



FIG. 243.—Bronze nails from the Treasury of Atreus.

is this the only instance either in the *Iliad* or *Odyssey* of brazen and golden palaces, *e.g.* of palaces whose walls are overlaid with one or other of the precious metals.² Thus, Telemachus, on entering the high resounding house of Menelaus, admires the glimmer of bronze, of gold and electrum, of silver and ivory.³ The poet's tale has been brilliantly confirmed by the results of the excavations. The circular chamber of the Tomb of Atreus was picked out, from base to summit, with bronze rosettes. Part of the lining may well have been silver or gold, or both combined. We have sure proofs that gilt nails were used here; why then should not the noble metals have been introduced, like glass enamel, in the frieze to bring out certain details of the form? Sheets of gold and silver, cunningly pierced, may have been fixed to a wood or other⁴ backing, in a certain class of edifices.

¹ *Odyssey*.

² *Iliad*.

³ *Odyssey*.

⁴ Iron is the word used in the text, but I cannot help thinking its being due to a *lapsus calami*.—TRANS.

Remembering the enormous quantities of silver and gold above all that came out of a single Mycenaean necropolis, nobody will deem our assumption as very improbable. We need not the testimony of Homer to be sure that ivory inlay was largely employed to embellish wainscoting, ceilings, and entablatures—have not numberless pieces of this fine material been picked up from amidst these ruins? In the Homeric passages cited above are two words calling for explanation, respecting which opinions were divided even in antiquity. Cyanus (κύανος) has generally been explained as blue steel, commentators having overlooked a passage in Theophrastus which gives the real meaning of the word. This writer distinguishes between the natural cyanus (αὐτοφυής) and the artificial cyanus (σκευαστός), which elsewhere he also calls fused cyanus (κύανος χυτός). By natural cyanus is meant lapis lazuli, lazulite, and he tells us that the artificial cyanus was prepared in Egypt, and that from Phœnicia came, as part of the tribute, a cyanus which was obtained by firing (πεπυρωμένος). This burnt kuanos is no more than glass-paste coloured blue with copper ore, and sometimes with cobalt. The Egyptians and Phœnicians were great adepts in fashioning out of it little figures, amulets, and ornaments, or covering terracotta with a thin layer of glass enamel. Lazulite is won from the native ore in small pieces alone. Its main source is Tartary, particularly the present Badachkan. From hence the precious stone was brought to Egypt in small quantity by caravans. If even in the Delta the stone was deemed too costly to be used as border to large surfaces, it is in the last degree unlikely that we should meet with it on Grecian soil. At any rate, no trace of it has been found at Mycenæ, either in the tombs or palaces; but glass-paste, often coloured blue, like that of the Tirynthian frieze, has been picked up in abundance enough. The cyanus of Homer, therefore, cannot be anything but enamel which he saw in some chieftain's house or other, and forthwith transferred to the habitation of the Phæacian king.

We next come to the name of the material placed between the gold and silver, which in the passage relating to the palace of Menelaus occurs in the genitive case, ἡλέκτρου; hence the question has been raised whether the genitive ἡλέκτρου corresponds to the masculine noun ὁ ἡλεκτρος, a natural alloy of gold and silver, or the neuter τὸ ἡλεκτρον, amber. All the probabilities

are in favour of the first hypothesis. There is, first of all, the situation assigned to the substance, between gold and silver, in Homer's enumeration. Amber, moreover, was never common in Greece. The poet only mentions it as forming part of gold necklaces. It has not been traced at Tiryns, and in sepulchral furniture it solely appears in the shape of small insignificant beads. Of course there is always a remote possibility of amber having been inserted in bronze friezes; but it is much more likely that we are confronted here by a decoration entirely composed of metal laminæ, where the pale yellow of the electrum formed a kind of transition between the ruddy glitter of gold and the shining white of silver.

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